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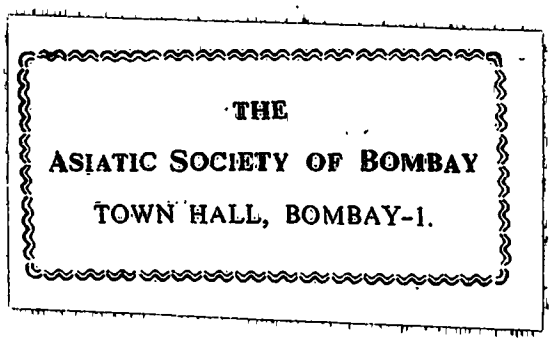

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Calcutta University Commission, 1917-19

REPORT

Volume III

PART I

Analysis of Present Conditions

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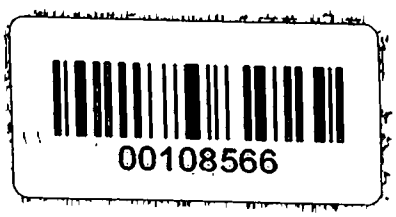
CALCUTTA
SUPERINTENDENT GOVERNMENT PRINTING, INDIA
1919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CHAPTER XXIX.—INTER-UNIVERSITY RELATIONS.

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some to the teachers and, by fostering exclusiveness, are prejudicial to the progress of universities. (12) Recent efforts of the University of Calcutta to combat the evil by the appointment of several teachers from outside Bengal. (13) Discussion of the Post-Graduate Committee's suggestions for closer co-operation between universities. (14—15) The example of private associations and individuals in the direction of co-operation, (16) has not been imitated by the universities themselves who hold no conferences with each other. (17) Necessity of mutual understanding in the work of research, as recommended by the Post-Graduate Committee, and (18) by Sir Alfred Hopkinson, is not sufficiently realised, and (19—20) points to the need of a central authority. (21) The territorial limits are also harassing to students who may desire, or be compelled, to change their universities. (22) Summary of examination equivalents, (23) indicates delay and restriction. (24) The new regulations of Bombay University, (25—26) are based on the principle of reciprocity, and (26) of collegiate responsibility for admission of students from outside the province. (27) Some external supervision may be necessary; evidence of Mr. Südmersen, the Rev. Garfield Williams and (28) Mr. H. Sharp.

Section II. New developments in university policy.—(29) Provincial boundaries, (30—31) though not linguistic requirements, (32) may render necessary the continuance of the territorial system, but (33) the creation of the Hindu University, Benares, and (34) the influx of new ideas (35) are commented upon by correspondents. (36) The multiplication of affiliating universities is criticised by Mr. Mark Hunter who hopes (37—38) that localised universities will be constituted in the future. (39—40) The Muslim Deputation's suggestion of localised universities under tutelage is discussed.

Section III. Indian students in other lands.—(41) Scope of the section. (42—45) Numbers of Indian students in the United Kingdom and reasons why they go there. (46) Requirements of American and Japanese universities; and (47) of British universities. (48) Anomalies in their regulations. (49) Record of University State scholars. (50—54) Discussion of the ages and qualifications of Indian students who go abroad for study. (55) Difficulties of Indian scholars in Sanskrit. (56) Connexion between Indian and overseas universities is at present limited mainly to the admission of Indian students to overseas universities. (57) The new Committees at Oxford and Cambridge, (58—59) may be the germs of a closer connexion between India and the West.

PART I

Analysis —of— Present Conditions

(concluded)

CHAPTER XXI.

The Training of Teachers.

I.—The scope of the chapter.

1. We are not directly concerned with primary education. The training of teachers for primary schools is, therefore, not dealt with in our report, except in so far as we mention institutions, whose main function is to train teachers for secondary schools, but which also train workers who are intended for posts connected with primary education, such as head-*pandits* for training schools for primary school teachers, generally known as *guru*-training schools, and inspecting *pandits*. All but very few of the primary school teachers of Bengal are men who have received nothing more than an elementary education—very often of the scantiest—and they have been trained, *i.e.*, if at all, at special institutions called *guru*-training schools or *muallim*-training schools. A *muallim*-training school is one which trains teachers for *maktabs* or Islamic primary schools which add some secular instruction, *e.g.*, reading and writing in Bengali and arithmetic, to their denominational teaching.[1] The training of women teachers is dealt with in Chapter XIV.

2. The official statistics divide secondary schools for Indians under three heads :—high schools, middle English schools, and middle vernacular schools. A complete high school contains three sections—the high section, the middle section, and the primary section ; a complete middle school comprises the middle and primary sections only. The middle vernacular school is not supposed to provide any teaching of English ; but English is taught as a second language in some of the classes of middle English and high schools, and it becomes, at least nominally, the medium of instruction in all the classes of the high section. Thus teachers in secondary schools in Bengal are ranged roughly

[1] The Hindu teacher or *pandit* who teaches in a primary school is generally known as a *guru* or elder. The corresponding term among the Musalmans is *mianji* or *muallim*. A recent Bengal Committee of Musalmans stated that the latter term is the one which ought to be used.

in two categories according as they teach through the medium of English or the vernacular. Those who teach English as a second language cannot be reckoned exclusively in either category. In some of the better high schools the teaching of English as a second language is in the hands of men who have a working knowledge of the language and who are able to make use of something approaching the direct method. Such men are nearly always university graduates. In the less efficient high schools and in practically all the middle English schools the teaching of English as a second language is entrusted to teachers who can talk English little better than the average public schoolmaster in England can talk French. In these schools the teaching of English as a second language seldom, if ever, rises beyond the literal translation of Bengali words and sentences into English. In this section of our report we deal with the training of teachers for secondary schools in Bengal, *viz.*:—

(*a*) those who teach English and also other subjects through the medium of English;

(*b*) those who teach English alone whether by the direct method or not; and

(*c*) those who teach subjects other than English through the medium of the vernacular.

The last category includes teachers who work in the primary sections of secondary schools, but there are some special teachers, such as drawing and drill masters—meaning by the last those who teach drill only—who do not come within the scope of this section of the report, seeing that their needs are not met by an ordinary normal school course.

3. Two different systems of class organisation are still current in Bengal, for the systems which were prescribed respectively by the Governments of Bengal and of Eastern Bengal and Assam have not yet been brought together. Consequently, there is one system in vogue in the Presidency and Burdwan divisions, and another in the Dacca, Rajshahi, and Chittagong divisions. For the sake of clearness we have inserted a table on the next page.

II.—Institutions.

4. Institutions which train men teachers for secondary schools are of the two following types:—

(*i*) Training colleges.

Stage.	Eastern Bengal.					Western Bengal.				
	High.	Middle English.	Middle Vernacular.	Upper Primary.	Lower Primary.	High.	Middle English.	Middle Vernacular.	Upper Primary.	Lower Primary.
High	X, IX, VIII, VII	English used as medium of instruction.				I, II, III, IV	English used as medium of instruction.			
Middle	VI*, V*	VI*, V*	VII, VI			V*, VI*	VI*, V*	VI, V		
Primary	IV*	IV*	V	(V U. P. stage)		VIIA*	IV*	IV	(IV U. P. stage)	
	III*	III*	IV	IV	IV	VIIB*	III*	III	III ,,	
	II	II	III	III	III	VIIIA	II	II	II	II
			II	II	II	VIII B	I	I	I	I
	I	I	Second year, Infants. First year, Infants.	Second year, Infants. First year, Infants.	Second year, Infants. First year, Infants.	Second year, Infants. First year, Infants.	Second year, Infants. First year, Infants.	Second year, Infants. First year, Infants.	Second year, Infants. First year, Infants.	Second year, Infants. First year, Infants.

* English taught as a second language.

(*ii*) First-grade training schools, as they are called in Western Bengal, or normal schools, as they are called in Eastern Bengal.

Training colleges are affiliated to the University of Calcutta; they admit either graduates or those who have reached the intermediate stage of the university course. They give all their teaching in English. The first-grade training and normal schools teach through the medium of the vernacular—indeed the normal schools of Eastern Bengal do not teach English at all, though the Western Bengal first-grade training schools include it in their curriculum as a second language. Speaking generally, the purpose of the training colleges is to train graduates, or those who have passed the university intermediate examination, to be teachers through the medium of English, while the function of the training and normal schools is to train teachers for the lower classes of high schools, for middle schools, and for a few of those posts connected with primary education, which are mentioned in paragraph 1 above. The lowest qualification accepted for admission into first-grade training or normal schools is the completion of the middle English or middle vernacular stage of the school course.

5. On the 3rd March 1917 there were three training colleges for men affiliated to the University of Calcutta of which two, *viz.*, the David Hare Training Institution, Calcutta, and the Dacca Training College are Government institutions; while the third, the London Missionary Society's College, at Bhowanipur, Calcutta, was an aided institution. On the 31st March 1917 there were 93 students in these institutions of whom 51 were graduates. The expenditure on training colleges during 1916-17 was Rs. 95,443, of which Rs. 92,743 came from provincial revenues.

6. The Calcutta University awards a degree in teaching—the bachelor of teaching; it also gives a licence in teaching. The conditions governing the taking of these qualifications are to be found in Chapters XXXIX and XL respectively of the regulations of the University. The B.T. degree course has to be preceded by graduation in arts or science and extends over one academic year. The candidate must also have undergone a course of practical training extending over six consecutive months, or must have served as a teacher at a recognised school for a year. The licence course is preceded by success in the intermediate examination

in arts or science, and may be taken in one academical year, but a candidate cannot offer himself for the licence examination until two years have elapsed from the time of passing the intermediate examination. For both the degree and the licence it is necessary to have studied four theoretical subjects. They are :—

(*i*) The theory and practice of teaching in relation to mental and moral science.

(*ii*) Methods of teaching specific subjects and school management.

(*iii*) A selected educational classic or classics.

(*iv*) The history of educational ideas and methods (for the degree) and a selected course in modern English prose or poetry (for the licence).

7. The degree and the licence courses have been seriously criticised by those who have had experience in working them. It is objected that, considering the marked difference which in the majority of cases exists between the mental calibre of graduates and that of men whose general education has come to an end at the intermediate stage, the courses prescribed for the degree and the licence are too much on a level.[1] It is suggested, on the one hand, that the aim of the higher course should be not only to secure that the degree-holder is equipped as a competent class teacher, but also to secure that he understands the principles of teaching, the classification and discipline of school children, the organisation and purpose of games and other kinds of physical exercise, the control of a small office; and that he has a sound conception of the purpose and organisation of the educational machinery of a modern State. It is suggested, on the other hand, that the aim of the licence course should be much less ambitious, namely, to equip an assistant master in a high school to do the work of a class teacher and to obey instructions in all other branches of school work with intelligence, but that those few holders of the licence who are definitely above the average and who have perhaps failed to take a degree only through some misfortune, such as illness or poverty, should be allowed, preferably after a period of actual teaching work, to proceed to the B. T. degree after a further course in a training college. This is not possible under the present regulations of the Calcutta University.

[1] General Memoranda, page 377.

8. Then again it is objected that the courses are far too comprehensive in character. It is pointed out that the academic year opens in the first week in July and that the examinations start in the second half of March; that the actual period of study is, therefore, little more than eight months, and that from this period 45 days have to be subtracted on account of gazetted holidays.[1] It is suggested that the syllabus of teaching which at present requires three subjects, ought to be reduced for the candidates for the degree and more clearly defined for the candidates for the licence, the subjects for the latter being taken only in so far as they can be kept in the closest relation to existing school practice. But the syllabus most criticised is that prescribed for the degree course in the history of education. This syllabus requires a knowledge of Hindu education in all times and that of the mediæval Musalmans; the education of the Greeks and Romans have next to be studied; then follows general European education in the middle ages; then come the renaissance and a host of special and general studies. The syllabus concludes with "the organisation and history of national systems of education with special reference to England, Germany, America, and Japan."

9. But the theoretical subjects are by no means all that have to be studied. Many students go to the training colleges but ill-equipped in the knowledge of ordinary school subjects. Geography, for example, has scarcely ever been touched since the students were twelve or fourteen years of age, and then the subject was taught by methods which even at that time were hopelessly out of date. The training colleges have to test the students' knowledge of school subjects and to make some attempt to remedy the defects observed. The proper use of the blackboard, physical exercises, and games, the oral use of the English language, and school excursions present further necessary lines of activity. But with all these needs before them the college authorities are unable to omit any serious portion of the University syllabus because the students must pass the examination. The result is that the work generally suffers from superficiality.[2]

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[1] General Memoranda, page 362.

[2] Progress of Education in Bengal, 1912-13 to 1916-17. Fifth Quinquennial Review, by W. W. Hornell, (Calcutta, 1918), Chapter VI, paras. 301 and 302.

10. *The David Hare Training College, Calcutta*, was opened in July 1908 in part of the building in College Square which was at one time occupied by the Albert College. It is still housed in the same quarters and the accommodation is totally inadequate We were told that Government had recently acquired for this college a site of a little over six acres at Ballygunge and that a scheme for the construction of suitable buildings on this site at an estimated cost of Rs. 5,68,380 had been worked out, but that the scheme was held up indefinitely for want of funds. The number of students on the rolls of the college during 1916-17 was 27; eleven being Government officers, eight being aided school teachers, and eight private students. A certain number of the Government officers were inspectors of schools. In the course of the quinquennium which ended on the 31st March 1917 the college trained 116 teachers and inspecting officers.

11. The total cost of the college during 1916-17 was Rs. 24,661 and the whole of this amount came from provincial revenues. The cost of training each student was for the year Rs. 913. Government officers receive full pay while they are students of the college, but teachers from non-Government schools and other students who are not connected with the public service receive no allowances from Government. The college was until recently affiliated to the Calcutta University for the degree course only, but a proposal to affiliate it for the purposes of the licence course also was recently sanctioned by the Government of India.

12. Since 1915 the college has been under the control of a governing body consisting of six members, with the Assistant Director of Public Instruction, Bengal, as *ex-officio* president. The permanent staff of the college includes a principal who is an officer of the Indian Educational Service and was recruited from England for the work; also a vice-principal and master of method who was also recruited from England in the Indian Educational Service. Owing to the exigencies of the war both these officers have had to be sent temporarily to do other educational work. The Physical Director of the Young Men's Christian Association acts as a visiting professor of physical education and gives regular lectures in physiology, school hygiene, and other kindred subjects. The students get practical instruction in gymnastics in one of the gymnasia of the Young Men's Christian Association, but the college has no playground—a need which, we were told, is

severely felt. The students of the college practise teaching, under supervision, at the Hindu, Hare, and Sanskrit Collegiate Schools, all Government schools. There is no demonstration school in connexion with the college, but the scheme which has been worked out for re-establishing the college on the Ballygunge site provides for this.[1]

13. *The Dacca Training College* was opened in 1910. It prepares students both for the licence and the degree in teaching of the Calcutta University. It receives for training not only existing teachers of Government schools who receive full pay during the period of training, but also teachers from non-Government schools who receive for the training period their pay up to a maximum of Rs. 50 a month, and candidates for the teaching profession who are paid monthly stipends of Rs. 20 and Rs. 15 for the degree and the licence course students respectively. The licence course was at one time spread over two years, but it was recently reduced to one year with a view to turning out trained men more rapidly, effecting economy, and mitigating some of the hardships which attendance at the college imposed on ill-paid men. Nearly all Bengali teachers are married men and some of them have heavy family responsibilities. Many of them, while at the training college, have to keep up two establishments.

14. On the 31st March 1917 there were 59 students under training at the college; 24 were in the degree class and 35 in the licence class. There were 43 Hindus (including one Namasudra), 15 Musalmans and one Bengali Christian.

15. The permanent staff sanctioned for the college consists of a principal and a vice-principal in the Indian Educational Service, two teachers in the Provincial Educational Service, and two teachers in the Subordinate Educational Service, also an art master and a drill instructor. Both the principal and the vice-principal are absent doing military duty. There is a high school attached to the college and two other Government high schools in Dacca town are used by the students for practical teaching work. At one time there was in the college a class for the training of primary school teachers in nature study. The class proved a failure and after a four years' trial, it was discontinued.

[1] Progress of Education in Bengal, 1912-13 to 1916-17. Fifth Quinquennial Review, by W. W. Hornell (Calcutta, 1918), Chapter VI, paras. 307-311.

16. During 1916-17 the college cost Rs. 57,462, of which Rs. 54,762 came from provincial revenues; the balance being from subscriptions and other sources. The average annual cost of educating a student worked out on the figures of 1916-17 to Rs. 974, and this was considerably below the normal owing to the absence of the most highly-paid members of the staff. It is proposed to include the Dacca Training College in the proposed Dacca University.[1]

17. *The London Missionary Society's Institution, Bhowanipur, Calcutta*, used to teach up to the licence standard only. On the 31st March 1917 there were only seven students on the rolls of the college. During 1916-17 the college cost the public revenues Rs. 13,320 and this sum represented the total expenditure of the institution. The London Missionary Society has not been for some years in a position to spend anything on the college and Government recently decided that its maintenance, looking to the exceedingly meagre output of trained teachers, was not worth the money from public funds which that maintenance involved. We visited this college in December, 1917, but it has since been closed.[2]

18. *The first-grade training and normal schools* are six in number. Five of them (*viz.*, the schools at Calcutta, Hooghly, Dacca, Rangpur and Chittagong) are Government schools; the sixth, which is situated at Krishnagar and is under the management of the Church Missionary Society, is an aided institution. On the 31st March 1917 there were 456 students in these schools. The course of studies followed in the West Bengal schools was fixed in some detail as the result of the recommendations of a committee which sat in 1909. In those days the western divisions of the present Presidency were under the Government of Bengal, but the eastern divisions were under the Government of Eastern Bengal and Assam. The West Bengal course extends over three years. In East Bengal the curriculum is merely indicated under headings and the superintendents of the normal schools have had an opportunity of working out the details. This arrangement has not proved very successful. In the past the schools in both sections of the Presidency were usually in charge of men who were themselves untrained—a defect which the Education Department

[1] Progress of Education in Bengal, 1912-13 to 1916-17. Fifth Quinquennial Review, by W. W. Hornell (Calcutta, 1918), Chapter VI, paras. 312-317.

[2] *Ibid.*, paras. 318-320.

has recently attempted to remedy. The East Bengal course is of two years duration only.

19. We gather from the recent Quinquennial Review of Education in Bengal that the accommodation of the first-grade training and normal schools is generally inadequate, and in some cases bad, and that the arrangements for the practical training of the students are unsuitable and insufficient. These institutions might have been a valuable asset in the secondary education problem and their neglect is to be deplored. Our attention has been invited to the following passage which occurs in the last quinquennial report of the Inspector of Schools of the Dacca Division :—

"The importance of the normal school in the educational system can hardly be exaggerated. Next to the training college for the training of graduates and undergraduates it is the only institution where the teachers of secondary schools who are not eligible for training in the college can possibly be trained. The reorganisation of the normal school on a new basis so as to extend the sphere of its usefulness in view of the present day requirements is a matter of the utmost importance in connexion with the question of the reform of secondary schools."

20. The students of the Calcutta Training School draw stipends at the rate of Rs. 7 a month ; the stipends paid to the students of all the other schools are at the rate of Rs. 6 a month. The sanctioned number of stipends is at present 342, and the total cost of these stipends to the public funds is Rs. 2,127 a month, or Rs. 25,524 a year. The total expenditure on first-grade training and normal schools during 1916-17 was Rs. 87,028, of which Rs. 82,056 came from provincial revenues. These totals do not include expenditure on construction and repairs incurred in connexion with the buildings of the Government schools. We give below a table which shows the cost to provincial revenues incurred on account of each teacher turned out from these schools :—

Number of schools.	Number of passes in 1916-17.	Total cost in 1916-17 from Provincial revenues, excluding stipends.	Cost per trained teacher from Provincial Revenues.		
			(a) Establishment.	(b) Stipends for three years.	(c) Total.
		Rs.	Rs.	Rs.	Rs.
I. Western Bengal.					
Government-managed 2	40	25,148	628	234	862
Aided 1	2	2,379	1,189	.. Stipends for two years.	1,189
II. Eastern Bengal.					
Government-managed 3	83	24,035	360	144	504

21. Certificates, countersigned by the Director of Public Instruction, are awarded to the successful students. The examination of the Western Bengal candidates for these certificates was formerly under the direct control of the Director. In 1910 the Government of Eastern Bengal and Assam created a central board of examiners for the conduct of this and certain other examinations. This board has now ceased to exist and the examinations in the two parts of the Presidency have now been placed in the hands of the principals of the David Hare and Dacca Training Colleges respectively. The Bengal Education Department has provided us with the following table :—

Year.	No. of candidates examined.	No. of candidates passed.
1912-13	210	149
1913-14	149	87
1914-15	179	125
1915-16	193	135
1916-17	198	133
TOTAL	929	629

22. There is a consensus of opinion among inspectors of schools, especially those in the eastern divisions, that the quality of the outturn of these first-grade training and normal schools has deteriorated. The reasons assigned are :—

(*a*) the shortness of the two years' normal school course in Eastern Bengal; and

(*b*) the inferior quality of the pupils turned out from middle schools. This is attributed to the abolition of the public examination which used to close the middle school course.

With regard to (*a*) the author of the recently published quinquennial review of education in Bengal observes that a course extending over three years makes training a slow and costly affair. He adds that there are signs that students of higher initial qualifications than could formerly be obtained will be available in future and suggests that, if this is so, it may be possible to reduce the length of the course. He points out that if this can be done the cost to Government will be lessened, even if higher

stipends are provided, and that the production of teachers will thus be accelerated.[1]

III.—Suggestions.

23. Mr. E. E. Biss, the Principal of the Dacca Training College (he is now serving in the Indian Army Reserve of Officers) recommends the establishment of State licences for teachers in high schools. He urges that it is one of the responsibilities of the State to insist that none but fit teachers should be allowed to teach in such schools.

"State licences, either temporary or permanent, should, therefore, be established and all high school teachers compelled to provide themselves with one or the other at a fee only large enough to cover postal and printing expenses. Permanent licences should be issued to all teachers over forty years of age, and they should be allowed to finish their careers in peace. They should also be issued to teachers who have satisfied the authorities on the score of their professional qualifications. Temporary licences should be given to teachers under forty years of age who have not yet qualified themselves, but it should be understood that they are liable to be withdrawn if the holders fail to qualify themselves within a reasonable time. It may be hoped that, as the provision of facilities for the training of teachers becomes wider, the number of temporary licences will decrease until they are only used for young men at the commencement of their careers."

Mr. Biss' object in making these proposals is to secure for the high school teacher a definite professional status.[2]

24. Mr. Biss does not altogether approve of the present connexion between the University and the training colleges. He does not hold that there should be no connexion between the training of teachers and the University. On the contrary, he is anxious that teachers should feel that their study of education has great value from the academic point of view. His view is that there is a part of the professional work of a teacher which is not academic, for example, the technique of school and class organisation, the use of the black-board and of illustration generally, the organisation of physical exercise and the playing of games, the ability to maintain discipline in the every day conditions of school life, and the management of school hostels. Mr. Biss' experience has been that it is difficult for an affiliating university to lay down courses and to impose tests of real value in these matters, and he feels that it is of the greatest importance that the staffs of colleges

[1] Progress of Education in Bengal, 1912-13 to 1916-17. Fifth Quinquennial Review, by W. W. Hornell (Calcutta, 1918), Chapter VI, paras. 321-328.

[2] General Memoranda, page 359.

concerned should be in a position to vary the conditions and organisation of this side of the work. To this extent Mr. Biss has found the university connexion burdensome and he suggests, as a remedy, that all intending teachers, holding a qualification equal to, or higher than, the intermediate examination of the University should be required to go through a year's course of training in the technique of their profession, on the results of which State diplomas would be awarded. His proposal is that the State diploma should cover the following ground :—

(*a*) Organisation and class work, studied in a demonstration school.

(*b*) Selected school subjects and the methods of teaching them, including black-board work.

(*c*) Physical exercise and games, together with elementary hygiene.

(*d*) Spoken English, essay and précis writing, and the use of books.

(*e*) Several weeks' teaching under special supervision.

25. In connexion with the above criticisms it is interesting to cite the account given by Mr. A. H. Mackenzie,[1] the Principal of the Allahabad Training College, of the working of the examination for the teaching licence awarded by the Allahabad University :—

"The conditions of examination for the licence in teaching have been laid down by the board of studies in teaching. The members of this board are either engaged in the training of teachers, or are indirectly connected with this work. The University has given the board practically a free hand.

The principles which guided the board were as follows :—

(*a*) The system of examination should ensure as much uniformity as possible in the standard of assessing the work of candidates appearing from different colleges.

(*b*) It is not possible to devise any external examination which would in itself be a fair test in practice of teaching. The examination lesson at its best is given under artificial conditions ; it has been well described as being to the actual work of the class-room what the dress parade is to warfare.

(*c*) Colleges should have freedom to prescribe their own courses in those subjects in which it is possible for the syllabuses to reflect the individuality, or special qualifications, of members of the staff ; and in those subjects (*e.g.*, nature study) in which variation of the subject matter to suit local conditions is desirable.

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[1] Question 9

(*d*) In those subjects in which there is general agreement as to the content of courses it is possible for an external examiner to set questions which are a fair test of knowledge and of power to apply it; and, provided an external examination does not prejudice the teaching and learning, it is of value, for it secures public confidence in the award of the degree and gives a college the benefit of the opinion of an examiner who is in a position to compare its work with that of other colleges taking the same course.

The examination is conducted as follows :—

(*i*) *Practical teaching.*—The University appoints two external examiners. These hear each teacher give two lessons; usually, they hear only a part of each lesson, as there are four or five lessons going on simultaneously, and the examiners move from room to room. The examiners have before them the principal's opinion of each candidate, and a recommendation as to whether the candidate should pass or fail, and, if he passes, in which class (first, second, or third) he should be put. The principal's opinion is based on the records kept by the staff of the candidate's work as a student.

This system has answered well; the final results have been in agreement with the college records.

(*ii*) *Special subjects.*—There are optional courses in certain subjects—history, geography, mathematics, physics, chemistry, nature study, and manual training. In these subjects it is necessary to require from students careful practical work throughout the session, as well as knowledge which will show up in an examination. Moreover, the colleges are endeavouring to improve the teaching of these subjects in secondary schools and, with this aim in view, they experiment with changes in method and subject matter. It is essential, therefore, to give the colleges freedom to lay down their own courses in these subjects.

The system of examination is as follows :—

(A) Each college is informed in April of the names of the examiners; the college then forwards to the examiners copies of its detailed syllabuses.

(B) The examiners set papers on these syllabuses. Hitherto this has been easy, as only one college has sent in candidates for examination in special subjects. Should other colleges present candidates, it will be necessary to set in each subject a paper which will cover the ground common to all syllabuses and include in it alternative questions according as the syllabuses vary.

(C) The question papers are moderated by a board which meets in September. The principals of the two colleges affiliated for the licence are members of this board.

(D) The examination is held in the following April. Along with the answer books of candidates the examiners receive from the principal :—

(1) The candidates' marks in college examinations and copies of the college question papers.

(2) Note-books and records showing the practical work of candidates (in the case of manual training the examiner visits the college to inspect the work).

(3) Notes made by the candidates on the books read by them independently.

(4) Detailed diaries kept by the candidates of their work ('practical work,' 'private reading,' and 'lectures attended') in their special subjects. (These diaries are checked periodically and signed by the principal).

(5) The principal's opinion of each candidate.

The examiners take the above records into account in deciding a candidate's place in the list.

This system has been in operation for six years and has worked well; the examination has in no way prejudiced either the teaching or learning, and the results have been in agreement with the college records.

(*iii*) *Examination in the compulsory subjects of the course in theory.*—There are four compulsory written papers:—

(*a*) Principles of education.
(*b*) Methods of teaching.
(*c*) History of education.
(*d*) School management and school hygiene.

The question papers are set by external examiners. As there is general agreement as to what topics should be included in each of these subjects there is little danger of an examiner setting questions which would tend to restrict freedom of teaching; any danger of their doing so is obviated by the presence on the board of moderators of the principals of the two colleges concerned. There are, however, debatable topics on all the subjects, especially in principles of education and methods of teaching. Candidates have been handicapped by the fact that some examiners strongly held views with which the college professors were not in accord, and perhaps had not even discussed with their students. The results in the compulsory papers have not, therefore, always been in agreement with the college records. This difficulty has, to some extent, been met by a recent change in the regulations under which candidates will be required to pass only on their aggregate marks in the four subjects, and not, as hitherto, in each subject separately. It is hoped that by thus combining the marks obtained by a candidate in all subjects the idiosyncrasies of particular examiners will be neutralised. Personally, I would go further than this. I think that the committee bringing out the results should have before it a statement from the principals, showing the marks gained by candidates in college examinations in each subject of the course, and that this record of the work done by candidates, while under training, should be consulted by the committee to help it to decide not only cases on the border line between 'pass' and 'fail,' but also doubtful cases as to class, *i.e.* whether a candidate is to be placed in the first, second, or third division. With this modification, I think that our system of examination can well serve the purpose of testing a candidate's fitness for the teaching profession. An advantage of giving weight to college records is that it helps to ensure

steady work by students throughout their period of training. My experience has been that Indian students, much more than students in England, put off hard work until the examination is within sight; the reason is perhaps the Indian student's more impersonal outlook on life and probably also the climatic conditions under which he has to study."

26. Mr. Biss[1] further suggests that, when a State diploma-holder has taught satisfactorily in a recognised school for two years, he should be considered qualified to enter upon a single year's course of study leading to a university degree in teaching. He thinks that such a course might be provided either in a training college or in special classes in arts colleges. He regards it as essential that the classes should be kept small, and is of opinion that the courses should include the following:—

(*a*) A selected period of the history of education.
(*b*) Educational administration in India and in one or two other countries.
(*c*) School organisation.
(*d*) The theory of teaching.
(*e*) One school subject, or a group of subjects, studied in detail.

Mr. Biss considers that, during this year of study, the student should be provided with facilities for visiting as wide a range of educational institutions as possible, but he would not require the student to do much practical teaching—his diploma course and subsequent work as a teacher should have established his capacity in that direction. He is convinced that such a year of study, as he advocates, would be a relief to a teacher after some years' school teaching, and he would make it obligatory on every man who holds a responsible post in a school or as a school inspecting officer. He would allow a man who had passed the intermediate examination only to take the B. T. degree after two years' instruction in a college, provided that, when he appeared at the degree examination, he had done two years' satisfactory work as a regular teacher in a recognised school. He would not insist on the two years' teaching being continuous. Thus a man after passing the intermediate examination could go and work in a school for a year; he could then join a college for a year, after which he could teach for a second year; at the close of the second years' teaching he could join a special B. T. class and after a year in it he would

[1] General Memoranda, page 360.

be qualified to appear at the degree examination. Such an arrangement would not, in Mr. Biss' opinion, be prejudicial to the efficiency of schools, for, even as things now are, he considers that the best men who have passed the intermediate examination only are far better teachers than the worst graduates. The graduate who secured the B. T. degree would be distinguished from the man who had taken the degree by having two degrees—B. A. and B. T.

27. Mr. Biss regards it as desirable that a teacher should be encouraged to proceed from the B. T. degree to the M. A. degree, and he suggests that the University should provide an M. A. course in education for approved holders of the B. T. degree of at least two years' standing. He assumes that the question whether the subject of education is of sufficient cultural value for this purpose is no longer a matter of dispute, but he would allow qualified holders of the B. T. degree to take the M. A. degree not only in education but in any other of the accepted courses.[1]

28. Mr. W. E. Griffith, the Principal of the David Hare Training College, Calcutta—he is now working as a divisional inspector of schools—considers that provision should be made for the training of college, as well as school, teachers. He has visited a number of second-grade colleges and found that the teachers do not, as a rule, know how to impart their knowledge. He has noticed in particular that teachers of English are in the habit of lecturing incessantly to the students, the great majority of whom do not follow what is being said. Mr. Griffith's experience coincides with that gained by the members of the Commission as the result of their visits to colleges. His suggestion is that three months' professional courses should be organised for college teachers, and these courses should, he thinks, include lectures on the art of teaching, attendance at a few good lectures delivered on the subjects of the ordinary college curriculum, and the giving of lectures under supervision by the teachers taking the course. He does not consider that it would be necessary to establish special institutions for this purpose. He would make use of existing university colleges, selecting an institution at which there was a teacher strong in any particular subject as a centre for the teachers of that subject.[2]

[1] General Memoranda, page 360.

[2] *Ibid.*, page 363.

29. Mr. Chinta Haran Chakravarti, the Officiating Principal of the David Hare Training College, Calcutta, advocates the establishment by the Calcutta University of a chair of education and he thinks that one of the functions of the holder of this chair should be the organisation of popular lectures on educational subjects. He also considers that education should be made an optional subject for the B. A. degree. His view is that students going through such a course would learn the general principles of education as a preparation for subsequent teaching work. He remarks that this arrangement is in vogue in some American colleges.[1]

30. Mr. H. A. Stark, the Officiating Principal of the Dacca Training College, is of opinion that the qualitative and quantitative difference between the examinations for the degree and the licence should be clearly defined. He thinks also that, if the degree and licence courses cannot be conveniently spread over two years—and he admits that there are reasons why this cannot easily be arranged—the courses for the intermediate and B. A. examinations should be so constituted as to allow students to anticipate in their work for these examinations an appreciable portion of the syllabus for the teaching degree and licence respectively. Mr. Stark explains his proposals for the teaching degree course by the following scheme :—

FIRST YEAR.

In the third and fourth year classes of an arts college.	*In the first year class of a training college.*
(*a*) A long with the subject of mental and moral philosophy— Physiology, child psychology, elementary experimental pyschology as alternative to a group of text-books in mental and moral science.	(*a*) Physiology, mental philosophy, and selected portions of moral philosophy, child psychology, elementary experimental psychology.
(*b*) History of education (including the history of modern education in Bengal) as alternative to appointed text-books in, say, a specified period.	(*b*) History of education, including the history of modern education in Bengal.
(*c*) Selected English educational classics as alternative to a group of text-books in English classics prescribed for the B. A. examination.	(*c*) Selected English educational classics.

Mr. Stark suggests that, so far as possible, the same text-books should be used in the B. A. and B. T. classes, and that, whenever practicable, the principal and lecturers of the training college should

[1] General Memoranda, page 361.

teach the students for the arts degree and the students for the teaching degree together.

SECOND YEAR.

In the training college only.

1. Revision of the contents of school subjects.
2. School organisation and discipline.
3. Methods of teaching—general and specific.
4. Child study.
5. Oral English.
6. Physical education and organised games.
7. The practice of teaching.

31. For the purpose of relating the ordinary intermediate course with the course leading to the teaching licence examination—this course is also to be spread over two years—Mr. Stark would make provision in the intermediate course for history, geography, and elementary psychology. The history in the licence course would be the history of education in India, with special reference to modern education in Bengal. The candidates for the licence might spend their first year after matriculation either in an arts or in a training college, but their second year must be spent in a training college. Mr. Stark recommends that the practical examination, both for the degree and for the licence, should include an oral test in English.[1]

32. Mr. Biss, Mr. Griffith, and Mr. Chinta Haran Chakravarti, all think that many young men who might be developed into useful teachers, could they be taken in hand after the matriculation, are now lost to the teaching profession. Mr. Biss points out that subjects are selected for the intermediate examination sometimes according to the whim of the student, but more often according to the supposed easiness of the examination, or the combinations of subjects in which lectures are provided in the particular college, to which the student has succeeded in securing admission. He observes also that many matriculates who are capable of taking up the intermediate course are debarred from doing so by poverty. Mr. Biss considers that it would be worth while for the University to provide matriculates who intend to become teachers, either in a training college or in some other institution, with a special intermediate course in such school subjects as history, geography, mathematics, science, etc. Mr. Biss refers to the suggestion that such students might also be given during their intermediate course some instruction in the professional work of a teacher, but considers that it would be better for the students at this stage to concentrate

[1] General Memoranda, page 378.

on the subjects themselves. Mr. Griffith suggests that matriculates who desire to become teachers, but who cannot afford to continue their education, might be given bursaries sufficient to defray the expense of taking a full university degree course on condition that they would subsequently enter a secondary training college. Mr. Chakravarti's view is that a few selected high schools might be made centres for the training of matriculates under the supervision of trained head masters.[1]

IV.—*Teachers required in secondary schools and the pay and prospects of those now employed.*

33. It was recently estimated by the Bengal Education Department that, whereas the high schools of the Presidency required 745 trained teachers annually, and the middle schools' annual requirement was 925, the average annual output of trained teachers for these institutions was, at the present rate of production, 189. Indeed such facilities for training secondary school teachers as now exist in Bengal are wholly insufficient to make good the annual loss by resignation, death, or transfer to other vocations.

34. All those whom we have consulted agree that a larger supply of trained teachers is an indispensable condition of any substantial improvement in Bengal secondary education. Unfortunately, the possibility of increasing the supply does not depend wholly, or indeed mainly, on increasing the number of training institutions. We are told that those vacancies at the Dacca Training College which are reserved for candidates who are not Government servants or actual teachers have not infrequently been left unfilled, and we have already shown that the London Missionary Society's College at Bhowanipur, Calcutta, has had to be closed for want of students. Obviously, a man who is thinking of becoming a school master will not go through a course of professional training unless he sees that his prospects in his profession will thereby be improved.

Mr. Biss refers to this in his memorandum of evidence. Teachers who have not received any professional training are on the same footing as those who have been trained. "The only inducements," Mr. Biss writes, "which offer themselves to teachers to become trained voluntarily are their own interest in their professional work and a vague hope of possible preference for good

[1] General Memoranda, pages 360, 363 and 362.

posts." As a result the principal means of filling the training colleges remains that "of forcible deputation by the inspectors of schools."[1]

35. But the root cause lies deeper. As things now are, school teaching in Bengal is scarcely a profession at all, inasmuch as, with a few notable exceptions, the best of the qualified men who are at present working as school masters are avowedly only doing so, until they can take up some more lucrative employment. A few head masterships of Government high schools in Bengal are included in the Provincial Educational Service and as such their incumbents are eligible for pay up to the rate of Rs. 700 a month, but the great majority of these posts are included in the Subordinate Educational Service and some head masters are now drawing salaries of not more than Rs. 60 a month. The average salary of a head master of a Government high school is Rs. 183-10-3, but head masters (excluding those in the Provincial Educational Service) and assistant head masters draw allowances of Rs. 50 and Rs. 20 a month respectively. The highest salary to which an assistant master in a Government high school is eligible under existing conditions is Rs. 250 in the Subordinate Educational Service, but the initial salaries paid are Rs. 50 a month in the Subordinate Educational Service for holders of the M. A. degree, Rs. 35—2—45 a month in the Lower Subordinate Educational Service for holders of the B. A. degree, and Rs. 15—1—20 in the Lower Subordinate Educational Service for those of lesser academic qualifications. The average salary now drawn by an assistant master in a Government high school is Rs. 49-8-7. We are informed by the office of the Director of Public Instruction, Bengal, that the actual salaries of graduate teachers in private high schools range from Rs. 40 to Rs. 50 a month, while the salaries of those teachers who have not gone beyond the intermediate stage of the university course range from Rs. 25 to Rs. 30 a month. Teachers whose sole academic qualification is that they have passed the matriculation examination are still employed in Government high schools though their employment is now discouraged. In private high schools about 15 per cent. of the teachers employed are mere matriculates, whose pay ranges from Rs. 18 to Rs. 20 a month. The author of the Fifth Quinquennial Review of Education in Bengal quotes one of the divisional inspectors as having stated in his quinquennial report

[1] General Memoranda, page 359.

that " the low initial pay of the Subordinate Educational Service and the Lower Subordinate Educational Service and the ungraded services (*i.e.*, posts not included in the graded services but carrying fixed pay) offers little or no inducement to competent men to join the Educational Department, and now-a-days it is practically impossible to recruit men on a miserable pittance of Rs. 15 a month."[1] Mr. Biss points out that the training colleges (this is not altogether true of the first-grade training and normal schools) are full of Government servants who have been driven there by inspectors, frequently against their will, and who know that the labour and the expense which are thus imposed upon them will do little, if anything, to better their prospects.[2]

36. These being the conditions we were not surprised to find that a tradition of school teaching has scarcely as yet been evolved in Bengal. The ordinary educated Bengali teacher has very little idea of what school teaching ought to be—here again we wish to add a proviso that we came across a very few brilliant exceptions—and the work does not attract him. His capacities lie more in the direction of lecturing, which partly, though not by any means wholly, accounts for the universal preference for college, rather than school, work. Those who have done well in their university careers, and are anxious to enter the Education Department as teachers, never agree, unless they are driven to do so by poverty, to accept mast[illegible]ships in Government schools. Such men invariably prefer to [illegible]it, usually doing nothing at all, on the chance of a college p[illegible] being offered to them. Some of the most eminent university [illegible]fessors in Europe started their careers as school masters, and a young man, when he is taken on to the staff of a Government college, would be more effective if he had had some school teaching experience. But the general attitude of young and promising Bengali graduates towards school work is under existing conditions entirely reasonable. The measure of dignity of school teaching in Bengal and its attractiveness as a profession may, in fact, be stated in the terms of the salaries which school masters earn; and it is not a matter for surprise that a man who has any choice in the matter now avoids the school master's profession.

[1] Progress of Education in Bengal, 1912-13 to 1916-17. Fifth Quinquennial Review, by W. W. Hornell (Calcutta, 1918), Chapter VI, para. 23.

[2] General Memoranda, page 359.

CHAPTER XXII.

LEGAL EDUCATION.

I.

1. For more than two-thirds of a century, Bengal has produced in abundance lawyers of acknowledged ability and eminence. For more than half a century, Bengal lawyers have occupied, with pre-eminent success, seats on the bench of the highest court in the land and of the subordinate courts throughout the country. In recent years, when in accordance with the progressive policy which has characterised the Government of this generation, it was decided to find places for qualified Indians on the Judicial Committee of the Privy Council and the Executive Council of the Governor-General of India, the first nominee was in each instance a talented Bengali lawyer. If any other testimony were needed in proof of the capacity of the people of Bengal to distinguish themselves in the legal profession, reference might be made to the observations of Sir Barnes Peacock who, after a career of marked distinction at the Bar in England, was successively Legal Member and Vice-President of the Council of the Governor-General, last Chief Justice of the Supreme Court and first Chief Justice of the Calcutta High Court. On the eve of his retirement, relying on his experience of eighteen years in this country, he made the following statement[1] on the 21st April 1870 :—

"I am only expressing my honest conviction when I say that, after my long experience of the pleaders of this court, many arguments on points of law which I have heard from them will bear comparison as regards learning, ingenuity, research, closeness of reasoning, clearness and logical arrangement, with many of those which have been addressed by some of the most learned and distinguished advocates of this court (members of the English Bar) and even with many of those which I have heard addressed to the courts of law and equity in England. The same remark may be justly made with regard to arguments which I have heard upon complicated states of fact in commenting upon and sifting the conflicting evidence of false and prevaricating witnesses."

[1] Sevestre's Reports, Volume XI.

It is singular that the people, so successful in the pursuit of the legal profession, had not, till quite recent years, adequate opportunity for legal training available to them in this country for the development of their natural aptitude; it may, indeed, be well maintained that the persons who have achieved success have been able to do so, not by reason, but in spite of the system in which they have been brought up.

2. Before we review in brief outline the history of legal studies in this University, it is desirable to emphasise one fact of fundamental importance, namely, that the possession of a university degree in law is, with a few exceptions, a necessary pre-requisite for admission to the legal profession here: Under section 10 of the Charter of the High Court of Calcutta, dated the 28th December 1865, which substantially reproduced the corresponding provision of the first Charter of the 14th May 1862, the High Court is invested with authority to make rules for the qualifications and admission of proper persons to be advocates, vakils and attorneys-at-law of that court. Under section 6 of the Legal Practitioners Act, 1879, the High Court is similarly empowered to make rules for the qualifications, admission and certificates of proper persons to be pleaders of the subordinate courts. It may here be mentioned parenthetically that advocates of the High Court are entitled to practise on both the original and the appellate sides of the Court as also in subordinate courts. Vakils of the High Court are entitled to practise on the appellate side of the High Court and in subordinate courts. Pleaders are entitled to practise only in the subordinate courts. If an advocate and a vakil appear in the same case on the same side, the advocate is entitled to precedence irrespective of the duration of his standing in the profession. Similarly, if a vakil and a pleader appear in the same case and on the same side, the vakil is entitled to precedence. To make clear the importance of a university law degree in this Presidency, we may briefly set out here the substance of the rules framed by the High Court in respect of the qualifications to be required from candidates for enrolment as advocates, vakils or pleaders.

3. Any person may be admitted as an advocate of the High Court who is entitled to practise as a barrister in England or Ireland or as a member of the Faculty of Advocates in Scotland and intends to practise in the High Court or the courts subordinate thereto:

Provided that he has (unless he is a member of the Faculty of Advocates) read for not less than one year in the chambers of a practising barrister in England and that he has also either—

(*a*) been educated in the United Kingdom for not less than three years exclusive of the year prescribed for reading in chambers as aforesaid, or

(*b*) taken a degree in a university in the United Kingdom, or

(*c*) taken a degree in law in the University of Calcutta, Madras, Bombay, Allahabad or the Punjab.

The proviso, it may be added, was inserted in 1912. The effect of the proviso is that an Indian student, unless he is prepared to incur the expense of education for not less than three years in the United Kingdom or residence and admission to a degree in a university in the United Kingdom, must, though a barrister, be also a graduate in law of one of the older Indian universities, before he can be enrolled as an advocate.

4. Every person before he is admitted to practise as a vakil in the High Court must have obtained the degree of bachelor of law in the University of Calcutta, Madras, Allahabad, the Punjab or Bombay. He must in addition have, since the date of graduation in the Faculty of Arts or Faculty of Science, served, with the approval of the Court, a regular clerkship to a vakil of the High Court (of not less than a prescribed standing) for the full period of two years. He must further, on the expiration of these two years, pass an examination in certain prescribed practical subjects, conducted by two judges of the Court.

5. A person who has obtained the degree of bachelor of law of one of the universities of Calcutta, Madras, Bombay or Allahabad or is a licentiate in law of any of these universities which gave that title may be enrolled as a pleader authorised to practise in any court subordinate to the High Court. The same privilege may be acquired by a person who has passed an examination, called the pleadership examination, conducted by a committee of the High Court known as the Committee of Legal Education. This examination, which has hitherto been open to all persons who have passed the intermediate examination of an Indian university and have attended defined courses of lectures in prescribed subjects, replaced, in fact, the examination for a licence in law instituted by the University at the time of its foundation and held

for the last time in 1872. The High Court has decided to abolish this examination with effect from the year 1921. Consequently, from 1921, the only qualification for enrolment as a pleader of the subordinate courts will be a degree in law of an Indian university.

6. From the statements contained in the three preceding paragraphs, it is manifest that the possession of a university degree in law is now practically essential for all who may desire to practise either in the High Court or in one of the courts subordinate thereto, and the tendency of the Court may well be gathered from its decision to abolish the lower test, which has been in force, in one shape or another, during 60 years, for the purpose of admission to the ranks of the profession in the subordinate courts. This desire to elevate the standard of admission was further unmistakably manifested when, in 1912, the Court decided, in respect of advocates, that the qualification accepted without question for nearly half a century, namely, membership of the English, Irish or Scottish Bar, was not sufficient, unless the applicant possessed either a degree in law of an Indian university or a degree of a British university or produced evidence that he had been educated in the United Kingdom for not less than three years. In this connexion, it is important to bear in mind that this step was taken, in spite of the fact that in recent years the qualifications for admission to the Bar in the United Kingdom have been raised and are substantially different from those that prevailed half a century ago. In view of the action thus deliberately taken by the High Court in more than one direction, it is obviously of paramount importance that the arrangements for legal instruction within the jurisdiction of the University should be fully adequate and that a degree in law should indicate a genuine qualification.

II.

7. We have stated above that, till recent years, the arrangements for legal instruction within the jurisdiction of the University were far from satisfactory, even though judged by standards in no way exacting; indeed, till 1909, there was not a single college devoted entirely to the study of law, as there were in the cases of medicine and engineering. It is not necessary for our present purpose to investigate the state of legal education in this Presidency before the establishment of the University of Calcutta; no useful purpose would be served by such an enquiry, as the work of the courts estab-

lished by the Company and the Nawab was carried on in a mode very dissimilar to what now prevails in the courts established by the Crown. The history of the institution of a legal profession in the Courts of the East India Company is lucidly set out in the great work on the Bengal Regulations by John Herbert Harington, for many years Chief Judge of the Sudder Court.[1] But it is interesting to observe that Regulation XXVII of 1814 provided that pleaders were to be either of the Hindu or Muslim religion and that preference was to be given to candidates educated in any of the Hindu or Muslim colleges established or supported by Government. This restriction was removed by Act I of 1846, which laid down "that the office of pleader in the Courts of the East India Company shall be open to all persons of whatever nation or religion, provided that no person shall be admitted as a pleader in any of those courts, unless he has obtained a certificate, in such manner as shall be directed by the Sudder Court, that he is of good character and duly qualified for the office." Shortly after this enactment, an examination was instituted to test the qualification of applicants for enrolment as pleaders, but no arrangements were made to give them the requisite training; the result was that students were left to their own resources in mastering the intricacies of Indian law as summarised in the portly volume prepared by John Clarke Marshman of Serampore, and for more than a generation famous as his 'Civil Guide.' This was a manifestly unsatisfactory state of things and was not wholly overlooked in the education despatch of 1854. Paragraph 30 of that despatch reads as follows:—

"It will be advisable to institute, in connexion with the universities, professorships for the purpose of the delivery of lectures in various branches of learning, for the acquisition of which, at any rate, in an advanced degree, facilities do not now exist in other institutions in India. Law is the most important of these subjects; and it will be for you to consider whether, as was proposed in the plan of the Council of Education to which we have before referred, the attendance upon certain lectures, and the attainment of a degree in law, may not, for the future, be made a qualification for vakeels and moonsiffs, instead of, or in addition to, the present system of examination, which must, however, be continued in places not within easy reach of an university."

8. To give effect to the policy thus indicated, at the time of the foundation of the University in 1857, law classes were attached

[1] See Volume I, 1st Edition, page 147, which states the law as in 1809, and Volume I, 2nd Edition, page 148, which states the law as in 1821.

to the Presidency College which was, in the main, an 'arts college.' The number of law students at the time was small, and the first professors employed to teach them were men of considerable distinction. There was, however, no separate principal or head of the so-called law department and there was no attempt at what may be described as an organisation of legal studies. The library was in no sense adequate and compared most unfavourably with the provision made in the arts and science departments. In 1864, the Government decided to attach law classes to its colleges at Hooghly, Dacca, Krishnagar, Berhampur, and Patna. In each case, a distinguished graduate in law was appointed on a fixed monthly salary of Rs. 200, and the most competent men available from the ranks of the then new batches of law graduates were engaged. The classes at all these colleges were small, and the teaching imparted was more or less sufficient from the point of view of the university law regulations as they existed at the time, although it cannot be denied that the provision made for libraries was even more slender than in the case of the Presidency College. In 1869, similar law classes were attached to the colleges at Cuttack, and Chittagong, and in 1880 to the college at Rajshahi. Up to the point of time we have reached, the law classes were attached only to Government colleges and the fees charged were moderately high. In the case of the Presidency College, the fee was five rupees a month in the first year class and ten rupees a month in each of the second and third year classes. In the case of other colleges, the fee was nowhere less than five rupees a month.

9. In 1882, the authorities of the Metropolitan Institution, Calcutta, (now Vidyasagar College) applied for affiliation in law. That college had been established by Pandit Iswar Chandra Vidyasagar avowedly with the object of making 'high education' accessible to his countrymen on less expensive terms than in Government institutions, by the exclusive employment of purely indigenous agency. In accordance with this policy, as soon as the application was granted (and no condition was imposed as to the minimum fees to be charged), law classes were opened with a monthly fee of Rs. 3 in the first year class, Rs. 4 in the second and Rs. 5 in the third year class. The immediate result was that the Presidency College lost the majority of its law students. In 1883 the City College was affiliated in law. Two years later, the Ripon College was affiliated in law, and opened classes at a uniform rate of Rs. 3

a month, with the result that the other private colleges in Calcutta were obliged to come down at once to the same level. About this time, the Government closed the law classes in the Presidency College. Later on, the Bangabasi College was affiliated in law in 1896, and the example was followed in Cooch Behar, Bhagalpur, Midnapur, Bankipore, Barisal and Rangoon. At the time when the Indian Universities Act of 1904 was passed the position was that there were 19 colleges nominally on the list to which law classes were attached, but there were really 18 at work, as the Presidency College then had no classes and had in fact none during more than 20 years previously. Meanwhile, the Calcutta colleges had raised their fees from Rs. 3 to Rs. 4 a month, while, in the mufassal colleges, the fee ranged from Rs. 3 to Rs. 6 a month. The classes everywhere were more or less full, but the institution which had the largest number of law students on its rolls and made the largest profit was the Ripon College.[1]

10. The large influx of law students in a number of institutions spread all over the country, none of them even reasonably equipped with a view to fulfil its obligations as an institution competent to impart instruction in law, led to deplorable results which might well have been anticipated. There was not only no serious attempt by the students to acquire a knowledge of law, but the cause of discipline severely suffered. Indeed, as early as 1890, the University discovered that there were lamentable irregularities in connexion with the law classes in the college in Calcutta which had on its rolls the largest number of students. The situation was so grave that the Syndicate recommended the withdrawal of affiliation for a period of one year, subsequently reduced to eight months; the Senate, however, took a more lenient view and gave the authorities an opportunity to re-organise and reform, and this opinion was ultimately accepted by the Government of India. Notwithstanding these precautions, the system of legal instruction, if it might be so called, continued to be unsatisfactory, and in 1908, two years after the new regulations had come into operation, the

[1] The extent of this profit may be judged from the fact that in 1890, when the Syndicate decided to have the law classes of the Ripon College disaffiliated for eight months on account of grave irregularities, it was stated on behalf of the college, before the Senate, that "the penalty would be practically a fine on the proprietor of the college of from Rs. 10,000 to Rs. 20,000." (Calcutta University Minutes, 1890-91, page 247).

condition was described in the following terms in a memorandum printed in the University minutes for 1908.[1]

III.

11. "As regards the efficiency of these colleges, judged from the point of view of the new regulations, only one opinion is possible. They are nowhere near the mark, and the arrangements made can at the best be regarded as nominal compliance with the regulations. The system which has prevailed for many years past in most of the Government colleges in the mufassal, namely, to pay the law lecturer the amount of fees paid by students, has been suicidal. To take one example; in a Government college situated not very many miles from Calcutta, there was during the last session (1907-8) only one student who paid Rs. 5 a month, and for this sum, the Government pleader who is the law lecturer is supposed to have taken him through a complete course of law studies. In Calcutta, where the number of students is very large, the state of things has been just the opposite and a successful endeavour has been made to turn the law classes into as lucrative a business as possible. The object has been gained practically by an entire sacrifice of discipline. A class may have on its rolls 150 students. The lecturer begins at the appointed time, say 8 o'clock in the morning, with a dozen students. After he has lectured for half an hour, students begin to drop in, till the class becomes pretty full when the rolls are called. Proper continuity of work is hardly possible in such circumstances. The majority of the students have no books. They do not intend to listen to the lectures. Very many of them are employed as teachers in schools or as clerks in offices, and their only anxiety is to get credit for attendance at a certain number of lectures as required by the university regulations, and it is by no means an unusual incident for a student to get himself marked present by a proxy.[2] Not only are the majority of the students irregular and unpunctual in attendance, not only is attendance expressly for the purpose of colourable compliance with the university regulations—the same

[1] Page 1,463.

[2] The Committee of Enquiry in 1890 found instances in which persons employed as teachers in mufassal schools had their names on the rolls of a college in Calcutta and were marked present at lectures which it was physically impossible for them to attend. (Calcutta University Minutes, 1890-91, pages 171-178).

laxity characterises in many instances the payment of college fees, which are often allowed to fall into arrears and are sometimes unrealised and lost to the colleges; and this laxity encourages our graduates to enter themselves largely as law students, so that at some future date, when occasion may arise, or when they may find it convenient, they may appear at the examination on the strength of their attendance at these lectures. This is manifestly contrary to the spirit of the new regulations. The new university regulations in law contemplate a thorough training in all the subjects of examination. The number of subjects has been increased by the introduction of important branches like Roman law, theory of legislation, equity, and the English law of real property. The number of lectures to be delivered to cover the course is considerably in excess of what was required under the old regulations. Students are required to attend moot courts where legal problems are discussed by them under the presidency of their professor as judge. This can be done with profit, only if the students have been taken in small batches and taught to analyse cases and deduce legal principles from a first-hand study of important judicial decisions. Then, again, in the examination under the new regulations, 40 per cent of the marks are to be allotted to the solution of questions framed with a view to test the ability of the candidate to apply the more important legal principles to concrete cases. The regulations provide not only that full credit is to be given for well-reasoned answers to such questions, even though the conclusions happen to differ from the views taken in decided cases, but also that no credit shall be given for bare answers unsupported by arguments. All this implies a far more thorough training than can be obtained by mere attendance at lectures delivered to large classes of students. Indeed, the regulations assume a thorough grounding in legal principles and a systematic study of illustrative cases such as can be pursued only in a good law library and under the guidance of an efficient teacher placed in charge of a limited number of students. From the point of view of the new regulations, not one of the law classes can pretend to make any approach to efficiency. No college has got a good law library or a sufficient number of efficient teachers. No attempt is made to enforce discipline among the students. The Bengal Education Department has realised this, and the law classes attached to all the Government colleges in Bengal will be closed from the beginning of

the current session (1908-9). The Government of Eastern Bengal and Assam has also realised the situation, and the law classes attached to the Government colleges in that province will shortly be closed and will be replaced by a law school at Dacca, a proposal for the affiliation of which will be submitted to the University by the Director of Public Instruction. So far as the private colleges out of Calcutta are concerned, they cannot possibly satisfy the requirements of the regulations. So far as the private colleges in Calcutta are concerned, the authorities of the Bangabasi College have already intimated to the University that they have decided to discontinue the law classes from the beginning of the ensuing session. So far as the Metropolitan Institution and the City College are concerned, neither of them makes a substantial profit upon the law classes, and if their law classes are closed, the financial position of the colleges would not be seriously affected. As regards the Ripon College, the case is different. This particular college effects substantial savings upon the law classes, a portion of which is apparently absorbed in the maintenance of the 'Arts' department. If the law classes in the Ripon College are closed, it would mean a substantial loss to the proprietor. None of the existing law classes, however, is efficient from the point of view of the new regulations, and these law classes cannot be allowed to exist, either for the maintenance of the 'arts' classes or for the profit of the proprietor. Neither the Syndicate nor the Senate can, with any sense of self-respect recommend the continuance of the present system, which has been a serious blot on our educational method for many years past and countenance any longer what has hitherto prospered under the name of legal education. The only solution of the situation is to close all the law classes and for the University to found a law college. No monopoly, however, need be claimed for the University Law College. There will be a similar law school, though on a smaller scale, at Dacca, and possibly, at no distant date, there may be a well equipped law school for Bihar at Bankipore. It is not inconceivable also that with liberal endowments a law college may be established in some other part of the province; but whenever or wherever such an institution may be established and whoever may maintain it, the essential condition for its affiliation to the University must be that it is a *bonâ fide* centre of legal education."

IV.

12. The memorandum from which we have quoted above, after stating that the University should not be expected to countenance a thoroughly unsound system, misnamed legal education, for the benefit of either 'arts' classes of colleges or of their proprietors, expressed the hope that no one would deem it the duty of the University to encourage or sanction the continuance of a system under which the very first art practised by young aspirants for entrance into a learned and honourable profession is defiance of discipline and evasion of the university regulations. The memorandum was considered by the Syndicate at a meeting held on the 4th July 1908 when the following resolution was adopted: "That the Syndicate recommend to the Senate that a University Law College be established and that the Syndicate be authorised to appoint a provisional committee to organise it." The memorandum was also considered by the Faculty of Law at a special meeting held on the 14th July 1908, when the following motion was carried after considerable discussion: "that the Faculty do record its opinion that for the promotion of legal education of students for degrees in law, it is desirable to establish a University Law College to serve as a model college, but not so as to create a monopoly either general or local." On the 21st July 1908, the matter came up for discussion before a meeting of the Senate specially convened for the purpose. For the first time in the history of the University, the Rector occupied the chair in order to enable the Vice-Chancellor to place the matter before the meeting. The Senate unanimously accepted the recommendation of the Syndicate and the Faculty of Law that a University Law College be established. This resolution of the Senate received the sanction of the Governor-General in Council on the 25th August 1908, and the college was formally affiliated to the University in law with effect from the commencement of the session 1909-10. The college was opened on the 5th July 1909. It is worthy of remark that the idea of the affiliating system was so deeply rooted that an institution founded by the University and proposed to be maintained by itself, was formally affiliated to it. The Vice-Chancellor of the University as President *ex-officio* of the Governing Body of the proposed institution applied to himself as Chairman of the Syndicate for the affiliation of the college, and the elaborate formalities prescribed by the Indian Universities Act of 1904 for the affiliation of a college were minutely

observed before the institution came into actual existence. It will be convenient if we now interrupt our narrative, and outline briefly at this stage the requirements for a degree in law in this University, before we proceed to describe the constitution of the college and its subsequent development.

13. Ever since the foundation of the University, the regulations have uniformly required that a degree in law can be taken only by persons who have previously taken a degree in the Faculty of Arts, or, since the creation of a degree in science, a corresponding degree in that Faculty. There has been some variation, however, in the requirement of attendance at lectures for a prescribed period. From 1858 to 1871, the regulations prescribed that a candidate for the degree of bachelor of law must have received instruction for a period of three years in a college affiliated in law. But two of these three years of instruction might have preceded admission to the degree of bachelor of arts. Consequently, during the period mentioned, it was open to a student, immediately after he had passed the F.A. examination, to enter simultaneously upon a study of law and of the degree course in arts, and this in fact was the practice ordinarily in vogue. If a candidate failed to pass the B.A. examination at the end of two years, his law study was necessarily interrupted and could be resumed for the concluding period, only after he had passed the B.A. examination. From 1871 to 1891, the regulations required attendance at lectures for a period of three years in a college affiliated in law, but prescribed that one of these years only could be taken before admission to the B.A. degree. The position thus was that students commenced the study of law in the middle of their course for the B.A. degree. Very often, as the student failed to pass the B.A. examination at the first opportunity, his law study was interrupted, possibly for a number of years, if the student was unsuccessful at successive B.A. examinations. The consequence of the system, which prevailed from 1858 to 1891, was found unsatisfactory in practice. A student in a state of uncertainty as to whether he would or would not be able to pass the B. A. examination, could not very well be expected seriously to undertake the study of law. The result was that in 1892 the period of study required for admission to the B. L. examination was reduced from three to two years, both of which must be after the B. A. examination. This alteration was made on the assumption that the extra year previously required and permitted to be taken before the B.A.

examination was essentially nominal. Up to the stage we have reached, six papers used to be set at the examination and candidates were required, to enable them to pass, to obtain a prescribed minimum in each paper and not less than one half of the aggregate marks on the whole examination. When the new regulations were framed, the two years period of law study was retained, but two important changes were introduced. The single examination taken at the end of two years was replaced by two examinations, the first to be taken at the end of the first year and the second at the end of the second year. The number of papers to be set was increased from six to eleven with a view to make the examinations a really searching test. Three of these papers were to be set for the first examination and eight for the second examination. The experience derived from the first attempt in the history of the University at a systematic teaching of law in the newly established University College, during the very first year of its existence disclosed, however, the grave defects of these arrangements. The teachers came unanimously to the conclusion that teaching of law to be really efficient must be spread over more than two years, and on the 11th May 1910, the Faculty of Law, after a full discussion, adopted the following changes in the regulations.

Candidates for the degree of bachelor of law must attend lectures for three years and pass three examinations as follows :—

(*a*) Preliminary examination, three papers, to be taken not earlier than the end of the first year ;

(*b*) Intermediate examination, four papers, to be taken not earlier than the end of the second year ;

(*c*) Final examination, four papers, to be taken not earlier than the end of the third year. No one can be admitted to the intermediate examination till he has previously passed the preliminary examination. But the intermediate and the final examinations may be taken together at the end of the third year. An exception is made in favour of students who take a first class at the preliminary examination. They may be allowed, if they so choose, to take the intermediate and final examinations together in the middle of the third year of law study. This concession, however, is practically valueless, because no one can be admitted to either the intermediate or the final examination, till he has

taken in full the prescribed courses, and this is by no means easy of accomplishment in a year and a half.

14. We shall now resume our narrative of the history of the foundation and development of the University Law College. The college was placed under a governing body consisting of 16 members appointed annually. The Vice-Chancellor is President *ex-officio*. Three judges of the High Court, nominated by the Chief Justice of Bengal in consultation with the Vice-Chancellor, represent the judges. The Advocate General of Bengal represents the barristers. The Senior Government Pleader represents the vakils. One nominee of the Incorporated Law Society represents the attorneys. Three members are nominated by the Faculty of Law, one of whom at least is a member of the Advocate Bar and one a member of the Vakil Bar. The Legal Remembrancer to the Government of Bengal and the Director of Public Instruction, Bengal, find places as representatives of the local Government. Finally, the Principal and the Vice-Principal are members *ex-officio* and two professors of the college are elected by the teaching staff. The members of the governing body are appointed annually and hold office during the academic year for which they are appointed. Occasional vacancies are filled up by the Syndicate upon the recommendation of the body entitled to appoint. The proceedings of the Governing Body are subject to confirmation by the Syndicate. This is inevitable under the constitution devised by the Indian Universities Act, 1904 ; but it seems hardly appropriate that the decisions of a professional and representative organisation like the one described above should be liable to be reversed by the Syndicate, particularly in technical matters ; in the event of a conflict, the results might be most unhappy, including a possible appeal to the Senate.

15. The staff of the college consists of a whole-time principal, a vice-principal and 58 professors required to meet the educational requirements of the students on the rolls. For the current year 1918-19, the total number of students in the various classes is as follows :—

First year class	861
Second year class	750
Third year class	743
TOTAL	2,354

16. The memorandum to which reference has already been made[1] contemplated instruction in three different ways :—

(1) systematic lectures to large classes, which might contain 150 students, as the maximum prescribed by the regulations ;

(2) work in tutorial classes to consist of not more than 25 students each ;

(3) moot courts where students are made to argue cases previously prescribed ; and

(4) periodical written exercises.

With the development of the college due to rapid increase in the number of students, it was found impossible to adhere strictly to the system thus outlined, and at the time we visited the institution there were two types of classes at work. In one type of classes, the students were required to attend three lectures a day, two of them delivered to classes of 150 students each ; the other to a class of 25 students, commonly known as a tutorial class. Each of these lectures extended over a period of 45 minutes, so that a student attended lectures which occupied him for two hours and fifteen minutes. In the other type of classes, the students were required to attend two lectures a day, each extending over one hour. Each of these classes comprised on an average from 50 to 60 students. There was some arrangement for written exercises, but in view of the large number of students, the exercises could not be systematically given and were of an inadequate character. There were also moot courts. Cases were prescribed in advance to be studied by the students. These were thereafter argued by them in the class with the professor in the chair. Every student could not be expected to take part in the discussions, and, as a matter of fact, in each class there was a small group of students who regularly joined in the debates while the others watched the proceedings.

17. The plan of instruction we have described undoubtedly marked a considerable improvement in the pre-existing condition of things ; but no one will deny that it is capable of further advance in essential particulars. We find, indeed, that the question of reorganisation of the teaching arrangements in the University Law College was considered by the Governing Body on the 27th June last and an elaborate system has been recently introduced.

[1] Para. 11 above.

V.

18. The vital defect of the system in force up till the last session was that it did not ensure independent work on the part of the student. He was supposed to listen patiently to long courses of lectures and, if he was specially diligent, to take down notes and analyses with a view to commit them to memory; he was in fact supplied with predigested food which he was expected to assimilate. If there is any branch of study which requires independent thought on the part of the student, it is unquestionably law, and he should be made to cultivate from the earliest period that habit of clear and accurate thinking which is essential for the attainment of professional success. But the requisite reform had to be delayed, as a complete re-organisation of the teaching arrangements necessarily involved financial considerations. At the time of the establishment of the college in 1909, the Senate advanced from the fee fund a considerable sum of money for the equipment of the library, and although the Government of India has, from the very commencement, given a substantial annual grant—Rs. 20,000 in the first instance, raised to Rs. 30,000 from 1912—it has taken the college many years to pay back the advance, and it was only on the 30th June 1918 that the final instalment was repaid into the general university funds. But from the commencement of the current academic session, the whole income of the college has become available for the benefit of the students, and the much-needed re-organisation has now been carried into effect.

19. The two principles which underlie the new system are as follows :—

(1) The number of formal lectures which each student is required to attend will be reduced.

(2) Each student is to be required periodically to compose a short essay on a prescribed subject under the guidance of his teacher and after receiving from him suggestions as to a suitable course of reading for this purpose. These exercises will be submitted to the teacher, who will correct them at home and will subsequently meet the students in small groups to discuss with them points arising out of the exercises and cognate topics.

20. Under the new system every student is required to attend only one lecture a day, and to compose, under tutorial guidance

as indicated above, one essay every two weeks. A student who faithfully does his work under this system may well be expected to cultivate that habit of accuracy and conciseness which is essential for a successful career in the profession. In addition, the arrangements for moot courts will be continued as required by university regulations.

The students have been divided into groups of 50 and each pair of groups is assigned to two lecturers. The duty of each teacher is consequently as follows :—

(1) to deliver, on six days in the week, one lecture a day to a class of 50 students at the most, extending over one hour ;
(2) to correct 25 exercises a week ;
(3) to meet 25 students in groups of eight on three days in the week, one hour each day.

The duty of each student is as follows :—

(1) to attend one lecture a day every day in the week ;
(2) to compose one essay each fortnight ;
(3) to attend a tutorial class for one hour, once a fortnight.

21. This scheme requires a staff of 48 teachers, namely, two for each of the 24 pairs of groups of 50 students. It is manifest that, with such a large staff, some links must be provided for co-ordination of the work. It would be disastrous, indeed, if each teacher were left free to follow his own way without consultation with such at any rate of his colleagues as are engaged in dealing with the same subject as he himself was teaching. The teachers in each subject have accordingly been grouped together under a chairman. Each group, under the guidance of its chairman, meets at stated times in the university buildings, prepares the syllabuses for the formal lectures, plans the work of the tutorial classes and the moot courts, discusses how the work has been progressing from week to week and generally compares notes of their experience. The gentlemen appointed as chairmen, however, not only secure that the work by the several groups of teachers with whom they are respectively associated is properly organised, but they themselves are expected to deliver, during the year, short courses of four to six public lectures on important topics selected at their choice. These lectures are open to all law students in the University, whether they are or are not members of the University Law College. Finally, a small council has been constituted consisting of the principal,

the vice-principal and the six chairmen to exercise general supervision over the whole of the teaching work of the institution; and one of the members of the governing body has been associated with this Council in order that the scheme of re-organisation may be effectively carried out.

22. The arrangements we have so far described relate to the instruction of students for the degree of bachelor of law. The college has also made provision for the advanced study of law, and courses of lectures have already been organised in jurisprudence, Roman law, Hindu law, Muhammadan law, and private international law for the benefit of such students as may aspire to the degree of master of law, leading ultimately to the highly prized degree of doctor of law, which has been attained only by a dozen individuals during the last sixty years. An examination of the syllabus for the degree of master of law, however, makes it manifest that the requisite arrangements should be far more elaborate than has hitherto been found possible.

23. The following table sets out the number of students in the University Law College from its commencement down to the present session :—

Session.	First year.	Second year.	Third year.	TOTAL.
1909-10	360	176	...	536
1910-11	247	410	...	657
1911-12	392	260	...	652
1912-13	561	390	301	1,252
1913-14	913	482	320	1,715
1914-15	724	700	443	1,867
1915-16	800	715	648	2,163
1916-17	909	627	625	2,161
1917-18	856	764	560	2,180
1918-19	861	750	743	2,354

The corresponding figures for the other law colleges during the session 1917-18 were as follows :—

Ripon	180	104	80	374
Gauhati	17	13	25	55
Dacca	94	106	55	255

24. The college possesses an extensive library which has cost up to date Rs. 1,40,000. The total number of books in the library at the commencement of the present session was 22,497. The library is divided into two departments, the reference section and the lending section. Students are allowed to take home books contained in the lending section. Books in the reference section cannot be removed from the library. The reference section contains 4,485 volumes of text-books and 12,698 volumes of reports. The lending section contains 3,522 volumes of text-books and 1,792 volumes of reports. But important books and reports are in duplicate or triplicate, and there are many more copies of some books required for constant reference. One of the professors, who is a whole-time officer, is in charge of the library and attends daily from 12 to 4 to direct the students in their reading and to give them such help and advice as they may need. The library, however, is kept open all day from morning till evening. The reading room contains accommodation for 100 students. The new system of instruction introduced from this year will obviously make it necessary for the students to utilise the library to a much larger extent than they have ever done before.

25. The Hardinge Hostel is an integral part of the college, and forms an extension of the Darbhanga buildings, where the library is located and the classes are held. There is accommodation in the hostel for 160 students. The principal's quarters form part of the Darbhanga buildings. There are also attached messes for students who cannot be accommodated in the Hardinge Hostel including a special one for Muslim students. A special officer is employed throughout the year to report periodically on the residences of students, and in view of the large numbers on the rolls, he finds ample occupation.

26. Along with the foundation of the University Law College steps were taken by the University to withdraw the privileges of affiliation from the numerous law classes previously mentioned. This led to a bitter controversy at the time, and the apprehension was freely expressed that the university authorities were actuated by a sinister motive to restrict unduly the facilities for legal education in the province. There were not very many adherents of the valuable doctrine enunciated by the late Mr. Justice Brewer that "the door of admission to the Bar must swing on reluctant

hinges, and only he be permitted to pass through who has by continued patient study fitted himself for the work of a safe counsellor and the place of a leader." The reform, however, was resolutely carried out, and schools of law were founded at Dacca, Gauhati and Bankipore, while in Calcutta, in addition to the University Law College, the Ripon Law College was allowed to continue under altered conditions. It is not necessary to describe here the Patna Law School, as it is now within the jurisdiction of the Patna University. The Dacca Law College, which has been mentioned in the chapter on the Dacca University, is under the guidance of an able and experienced vice-principal; its library, however, has been starved for want of adequate grants and the staff requires to be strengthened.[1] The Earle Law College at Gauhati counts on its rolls a small number of students. The library is well equipped and is kept fairly up to date. The work of instruction also is efficiently carried out. The Ripon Law College in Calcutta is now a small institution in comparison with the huge classes attached at one time to the 'arts college.' Its classes have received an accession of strength in recent years and the library has proved inadequate for the needs of students. We are informed that the authorities appear to be alive to the needs of the institution and steps are about to be taken to improve the library and to strengthen the staff.

27. The statements embodied in our review of post-graduate studies[2] show that a large number of those who have obtained the degree of bachelor in either the Faculty of Arts or the Faculty of Science take up the study of one or other of the subjects comprised in the M. A. and M. Sc. regulations. From the figures previously given in this chapter, it is equally clear that a considerable number of graduates in arts or science proceed to the study of law. From this it may be inferred that, at this stage, the graduates simultaneously pursue their studies in two faculties, namely, the Faculty of Law in addition to either the Faculty of Arts or the Faculty of Science. This state of things has been adversely criticised by some of our correspondents on the ground that a young man who undertakes serious work in two faculties is not likely to be able to fulfil satisfactorily his obligations as a student in either faculty. The discussion of this question, which is by no means free from

[1] Chapter XXXIII, paras. 110-114.

[2] Chapter XV.

difficulty, may conveniently be deferred to the second chapter on legal education.[1] Meanwhile, it is interesting to consider the extent to which this double study is pursued by our graduates. The figures are not available for past years, but we have been able to obtain those for the current session. During the session 1918-19, 748 students have joined the post-graduate classes in arts and 79 in science. Of these 827 students, 366 have joined one or other of the two law colleges in Calcutta. Amongst these 359 are M. A. students and 7 M. Sc. students. The remaining 461 students have not undertaken the study of law. In the sixth year class, there are during this session, 669 students, namely 578 in arts and 91 in science. Of these 669 students, 303 are also students of law, namely, 281 from the arts side and 22 from the science side. Of the 366 students in the sixth year class who do not read law, 297 belong to the arts side and 69 to the science side. These figures show that about 48 per cent. of the students who undertake post-graduate studies, simultaneously undertake the study of law. The following table shows, subject by subject, the number of M. A. and M. Sc. students who are also law students:—

Subject.	Fifth year Class.	Sixth year Class.
English	150	109
Mathematics	33	34
Philosophy	53	46
History	54	45
Economics	44	31
Sanskrit	2	7
Experimental Psychology	8	5
Arabic and Persian	3	2
Pali	3	1
Ancient Indian History	9	0
Comparative Philology	0	1
Applied Mathematics	4	5
Physics	2	7
Chemistry	1	3
Botany	0	4
Geology	0	1
Physiology	0	2
TOTAL	366	303

[1] Chapter XLV.

VI.

28. Before we bring to a close our survey of the facilities for legal education in the University, it is desirable to make some reference to the more important endowments held by the University for the promotion of legal studies. The necessity of adequate instruction for students of law was realised many years ago by Prasanna Kumar Tagore, a Fellow of the University and one of the most successful members of the legal profession in his own generation. By his will dated the 10th October 1862, he bequeathed to the University three lakhs of rupees, to be invested in Government securities so as to produce an annual income of Rs. 12,000. He directed that out of the income of the fund a law professorship be established to be called the Tagore Law Professorship. The salary of the professor was fixed at Rs. 10,000 a year and his duty was defined to be "to read or deliver at some place within the town of Calcutta one complete course of law lectures without charge to the students and other persons who might attend such lectures." He further directed that within six months after the delivery of each course of lectures, they be printed, and not less than 500 copies thereof be distributed gratuitously, the expense of printing and distribution to be defrayed out of the residue of the annual income of the fund. The founder finally directed that if after payment of the salary of the professor and of the cost of printing and distribution of the lectures any surplus remained, it might be devoted to the printing and publication of approved works on law or jurisprudence.[1] This was the first chair created in the University and continued to be the only chair till 1908. Prasanna Kumar Tagore died on the 30th August 1868, and his estate was immediately involved in protracted litigation which was ultimately carried on to the Judicial Committee of the Privy Council whose decision has become famous as a landmark in legal literature in India. The trustees of the estate, however, took steps to establish the chair during the pendancy of the litigation, and the first appointment was made in 1870. Since then, the chair has been filled by a long succession of distinguished lawyers whose labours have materially contributed

[1] Effect has been given to this direction on two occasions: (*i*) the Viramitrodaya, a work of great authority on Hindu Law has been translated by Mr. Gopal Chandra Sarkar; (*ii*) the Commentary of Medhatithi (the oldest extant) on the Institutes of Manu is in course of translation by Dr. Ganganath Jha.

to the development of legal literature in this country. Many of the volumes of lectures have attained the position of standard treatises in their respective subjects, while some have taken rank as classics of Indian law. The nephew of the founder, the late Maharajah Sir Jatindra Mahan Tagore Bahadur, presented to the University a marble statue of his uncle, which now forms an ornament of the Senate House. He also established two annual medals to be awarded to the most deserving of the law students attending the lectures of the Tagore professor. His son, the present Maharajah, Sir Prodyot Kumar Tagore, made a gift of ten thousand rupees to the library of the University Law College and also a bronze bust of his father which has been placed in the reading-room. There is no doubt that the foundation of the Tagore chair has vitally stimulated study and research in the field of law for now nearly two generations. But it is worthy of serious consideration whether, in view of later developments in legal instruction, the terms of appointment to the Chair may not be modified with advantage.

29. In 1902, the late Mr. Jogendra Chandra Ghosh, a Fellow of the University, made a gift of Rs. 10,000 for the encouragement of the study of comparative Indian law by persons belonging to what is called the *adhyapak* class in Bengal and for the purpose of establishing a triennial prize to be awarded to the writer of the best essay on the subject. The founder shared the view held by many distinguished jurists that Hindu law as developed by British Indian courts has deviated in many respects from the fundamental principles enunciated in the ancient Sanskrit books. His object was, by the establishment of the prize, to encourage the study of the Hindu Smriti Sastra (law and ritual) as it existed at the time when India came under British rule and to investigate how and to what extent the fundamental law had been modified, under British influence, by the operation of legislation and judicial decisions. Mr. Ghosh, however, unfortunately restricted the field of possible investigators to members of the *adhyapak* class, that is scholars of the Smriti Sastra, the students of Smriti in the Government Sanskrit College in Calcutta and in the *tôls* or indigenous Brahminical schools which send candidates for the Government title examinations and students in other similar institutions in India. The result of this limitation has been that the prize has been awarded only twice since its establishment. Members of the class whom Mr. Ghosh had in view, though possessed very often of an extensive knowledge of the ancient

and traditional schools of law, are generally ignorant of English and have not first-hand access to the wealth of material embodied in legislative enactments and judicial precedents. It is interesting to note that on the first occasion when the prize was awarded for a thesis on the law of adoption, it was divided equally between two *pandits*, one from Bengal, the other from Madras. On the second occasion, the prize was carried off by another Madras pandit for a thesis on the legal consequences of unchastity under Hindu law. It is plain that if this valuable endowment is to be fruitful of result, the *pandits* whom Mr. Ghosh had in view must have some training in English, and this emphasises the need for linking up the best Sanskrit scholars in the country with the promoters of oriental studies as organised by the University. This important subject is considered in other chapters of this report.

30. In 1911, Mr. Onauthnath Deb, a well-known citizen of Calcutta, made a gift of Rs. 25,000 to the University for the institution of an annual prize and a gold medal to promote original research in law. The prize and medal are open to all persons who have at any time been admitted to a degree in the University of Calcutta and are awarded for original research in a topic of jurisprudence or law, prescribed by the Faculty two years in advance of the date when the prize is to be awarded. This prize appears to have been awarded only thrice since its foundation, though there has been no lack of competitors. The variety of topics selected for the prize is sufficiently indicated by the fact that on the first occasion the award was made for a thesis on the origin and growth of the right of occupancy in agricultural land; on the second occasion, the subject of investigation was the effect of war on contracts; while in the third instance, the topic prescribed was trading with the enemy.

31. In 1916 Messrs. Ismail Ibrahim Salehjee and Hashim Ismail Salehjee, two well-known Muslim merchants of the city, offered to place at the disposal of the University Rs. 25,000 for the creation of an endowment for the promotion of study and research in Muslim law by the publication of texts and translations. It is a matter for regret that the University has not yet found it practicable to carry into effect the laudable object of the founders. Scholars and judges of eminence have emphasised from time to time the need for the publication of accurate editions and adequate versions of the great

treatises on Muslim law.[1] For the accomplishment of this task, the University requires editors and translators who unite in themselves a competent knowledge of Arabic and English with a thorough grasp of the principles of Muslim and modern jurisprudence. Such a combination is apparently rare in this country and we can only express the hope that scholars of this description may become available by the systematic development of Islamic studies on approved western lines in conjunction with traditional culture under the auspices of the University itself.

32. Our enumeration of the endowments created for the promotion of legal studies would be incomplete, if we were to omit all mention of the generous gift of Rs. 50,000 by Maharajah Sir Manindra Chandra Nandy of Kasimbazar for the establishment of scholarships for law students. As we have already stated, legal education had before 1908 come to be provided on the cheapest possible terms by the levy of so low a monthly tuition fee as Rs. 3. Consequently, when the University Law College was founded and the fee rate was fixed at Rs. 6 (subsequently raised to Rs. 7) a month, considerable dissatisfaction was expressed. The Maharajah of Kasimbazar came forward with the gift mentioned and instituted 24 scholarships of Rs. 6 a month payable to deserving students out of the income of the fund. The Government of Bengal, at the same time, made a grant of Rs. 3,500 a year for five years for the same purpose. This has now been discontinued; but scholarships are still paid to deserving students, out of the funds of the college, on the results of a special scholarship examination for first year students and on the results of the intermediate and final examinations for others. Two scholarships are also awarded for the encouragement of post-graduate study in law.

[1] Journal of the Asiatic Society of Bengal for 1915, Annual Address.

CHAPTER XXIII.

Medical Education.

I.—Sketch of the history of medical education in Bengal—General problems.

1. The transformation of medicine in the West which has taken place progressively from the 15th century onwards has no counterpart of India. In the West, medicine has influenced, and been influenced by, the physical and biological sciences, physics, chemistry, biology, anatomy, physiology, pathology, almost at every stage of their progress. These sciences in their modern forms are unknown to the majority of the adherents of the two ancient systems of medicine still practised in India on an immense scale.

2. The first, or Ayurvedic system, so called from its most venerable authority, the Ayur Veda, is that of the Hindus. It is one of a number of works, of which the chief, the Charaka Samhita and the Sushruta Samhita, in their original forms, are probably not of later date than the 6th century B.C.,[1] and are still regarded by many of the *Kavirajes*, or doctors of the Ayurvedic system, as having supreme authority.

In that system there was accumulated no doubt a considerable store of empirical knowledge, and the record of surgical skill;[2] but the literature of the system came to a stand-still in the middle ages, so that further advances could only be recorded by oral tradition. Such advances could only therefore be sporadic; and they must have been hindered by the force of written tradition in the same way as modern science was for so long hindered by the authority

[1] Dr. A. F. R. Hoernle (*Studies on the Medicine of Ancient India*, Part I Osteology, Clarendon Press, 1907) regards both these works as composite. According to him, the Sushruta Samhita appears to have been completed in its present form about the 2nd century A.D. by an author whom he terms Sushruta II (*loc. cit.*, pages 4, 5, 7, 8, 10); and the Charaka Samhita by Dridhabala, probably between the 7th and 9th centuries A.D., and not later than the 11th (*loc. cit.*, pages 2-16).

[2] An important thesis on surgical instruments used in the Ayurvedic system by Dr. Girindra Nath Mukhopadyaya has been published by the Calcutta University, 1913; a shorter and earlier account of this subject appeared in Dr. T. A. Wise's Commentary on the Hindu System of Medicine (1845).

of Aristotle. Intermingled with accurate anatomical and clinical observation there is in the Ayurvedic books much that is no less fantastic than the fantastic theories of a Paracelsus, or even later authors in Europe. The following passage may be quoted as characteristic of this aspect of Ayurvedic doctrine :—

"The favourable or unfavourable termination of a disease," says the author of the Sushruta Samhita,[1] "may be predicted from the appearance, speech, dress, and demeanour of the messenger sent to call in a physician, or from the nature of the asterism and the lunar phase marking the time of his arrival, or from the direction of the wind (*Anila*) blowing at the time, or from the nature of omens (*Shakuna*) seen by him on the road, or from the posture, temperament or speech of the physician himself. A messenger belonging to the same caste as the patient should be regarded as an auspicious omen, whereas one from a different caste would indicate a fatal or an unfavourable termination of the disease."

For prognosis of this kind there is no room in modern university teaching, though it is consistent with the beliefs in astrology and in omens still prevalent in India.

3. The second system, the Unani or Tibbi, is the Graeco-Arabic system of Hippocrates and Galen, Rhazes and Avicenna, which served as an early basis for western medicine and which was introduced into India by the Muslim conquerors, and is now practised by *hakims* in Bengal. Like the Ayurvedic system, it has, at any rate until recent years, been uninfluenced by modern science and remained what it was in the middle ages.

4. These were the two systems practised in India when western medical education was begun in Bengal by the establishment in 1822 of a 'School for Native Doctors' in Calcutta. In 1827 medical classes on the Ayurvedic system were opened at the Sanskrit College and classes on the Unani system were opened at the Madrassah about the same date.[2] These two classes appear to have been well attended. But the Company were not satisfied with the work

[1] *Sushruta Samhita*, translation in three volumes, edited by Kaviraj Kunja Lal Bhishagratna, 10 Kashi Ghose's Lane, Calcutta, 1907—1916, vol. I, page 270. The book was reviewed at length by Lieutenant-Colonel D. W. Sutherland, I.M.S., Imperial Serologist, in the Indian Medical Gazette for March 1918.

[2] Minutes of evidence taken before the Select Committee (of the House of Commons) on the affairs of the East India Company, 1832, pages 447, 435 and 494. A medical school was founded in Bombay in 1826 (*loc. cit.*, pages 474-5). According to the Quinquennial Review on the Progress of Education in India, 1897-8 to 1901-02 (page 233), the Grant Medical College at Bombay was founded in 1845, the Madras College in 1833, and the Lahore College in 1860.

done.[1] In 1833 Lord William Bentinck appointed a committee for the purpose of "improving the constitution and extending the benefits of the native medical institution, and devising a system of management and education calculated to give effect in both of these respects to the wishes of Government."[2] The Committee reported that the school was defective in many ways, owing to the absence of a proper qualifying standard of admission, the omission of the practical teaching of human anatomy, the shortness of the period of study, and for other reasons. On one point the Committee were divided, namely, whether English or the vernacular should be the language of instruction, but the weight of evidence submitted by the Anglicists, headed by Duff, gained the day.[3]

5. As a result of the report of this Committee a Government order was issued on 28th January 1835 abolishing not only the school but the medical classes in the Sanskrit College and the Madrassah, and instituting the Calcutta Medical College (of which the official though little used title is the Medical College of Bengal, Calcutta). The teaching was to be given in English; there were to be 50 foundation pupils, receiving a stipend, who were to spend from 4 to 6 years at the college and to be required 'to learn the principles and practice of the medical science in strict accordance with the mode adopted in Europe.' In addition to the pupils on the foundation, the benefits of the college were to be open to all classes of native youths between the ages of 14 and 20, without distinction of class or creed, provided they satisfied certain requirements. The

[1] Sir C. E. Trevelyan characterises the teaching as follows:—"The system of Galen and Hippocrates, and of the Shasters, with the addition of a few scraps of European medical science, was taught in classes which had been attached for that purpose to the Arabic and Sanskrit colleges at Calcutta, the object of which was to train up 'native doctors' or assistants to the European medical officers. There was only one teacher attached to this institution, and he delivered his lectures in Hindusthanee. The only medical books open to the pupils were a few short tracts which had been translated for their use into that language; the only dissection practised was that of the inferior animals. [*On the Education of the People of India* (1838), page 27.]

[2] *History of the Medical Schools of the Bengal Presidency*, by Dr. K. MacLeod (Calcutta, Bengal Secretariat Press, 1872), page 8. Most of the historical facts for which sources are not explicitly quoted in this chapter are derived from this book or from a note on the history of vernacular medical education in Bengal, furnished by the Government of India to the provincial Governments in a letter of 22nd June 1916.

[3] Sir Charles Trevelyan gives in an appendix to his book *On the Education of the People of India* an extract from the report of this Committee, of which he was a member, summarising the evidence on both sides.

Superintendent, with the aid of an assistant, was expected to instruct the pupils in anatomy, surgery, medicine and midwifery, and to qualify them for medical charges, either civil or military. It is a significant fact, as showing the desire of Government for a unified system, that the *Pandit*, Madusudan Gupta, who had been in charge of the medical classes at the Sanskrit College was transferred to the new institution[1] and had two assistants assigned to him.

6. The new school had great difficulties to overcome. "There were many", says an early report of the Council of the College, "who pronounced the failure of the undertaking to be inevitable." Of all the obstacles to success the most serious was the Hindu custom prescribing that higher castes might not touch the dead. The medical Shastras and the Sushruta Samhita[2] show clearly that dissection was practised by the Hindu doctors in early times; but custom was supreme. It was broken down by Madusudan Gupta, the former *Pandit* of the Sanskrit College, who on 10th January, 1836, 'with a few courageous pupils' began the dissection of a human body. In commemoration of this act, 'marked in the annals of Indian medicine,' Mr. Drinkwater Bethune, member of the Supreme Council of India, presented Madusudan's portrait to the College; and a marble tablet to his memory has been erected in the College entrance hall. From that time forward Indians of the highest castes have devoted themselves with enthusiasm and success to the study of medicine in all its branches.[3]

7. We can only follow out the history of the college and of its off-shoots in broad outline, marking those points mainly which affect the problems of to-day.

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[1] *The Origin and Progress of the Bengal Medical College* by James Harrison, M.D. (pamphlet reprinted from the Indian Annals of Medical Sciences, January 1858); (see also McLeod, *loc. cit.*).

[2] See the translation referred to above, Vol. II, *Sarira Sthanam*, pages 171-2. See also Hoernle, *loc. cit.*, pages 116-117.

[3] Madusudan Gupta had obviously already taken some steps in this direction at the Sanskrit College, for in a letter of the Public Department to Bengal of 20th September 1830 the following passage occurs with regard to the Sanskrit College:—"The English language and anatomy on European principles are now taught to considerable numbers, and with most encouraging results. In the words of Mr. Wilson, who examined the medical class, 'the triumph gained over native prejudices is nowhere more remarkable than in this class, in which, not only are the bones of the human skeleton handled without reluctance but in some instances dissection of the soft parts of animals performed by the students themselves'." Minutes of Evidence of the House of Commons on the affairs of the East India Company, 1832, page 494.

8. In 1837 a council was formed to administer the College and David Hare was appointed to act as secretary, a post which he retained till 1841. The system lasted till 1856 when the council and secretaryship were abolished and the government of the College was vested in the principal, aided by a council composed of the professors. The students at first attended clinical practice at hospitals in the city but in 1838 a small hospital was opened in connexion with the college, which was replaced by a larger one in the following year, and by the present College Hospital, in 1852-3, when the professors became physicians and surgeons of the new institution. It was decided in 1839 to reinstitute vernacular classes carried on in Hindustani, and in the same year European and Armenian students from Calcutta were admitted to the College. In 1845 the English teaching of the College was placed on a new basis, and the course was extended from four to five years; and in 1846, the course was recognised by three of the chief licensing bodies in London, the University of London, the Royal College of Surgeons, and the Society of Apothecaries. In 1847 a two years' 'apprentice course' was instituted for members of the subordinate medical service; and in 1851-2 a Bengali vernacular class was organised.

9. The Calcutta University, founded in 1857, was authorised under the original Act to confer the degrees of Licentiate and Doctor of Medicine[1]; and in the same year the Medical College was affiliated to the University, with which it has been closely associated since that time. The university entrance examination was made the qualification for entrance to the Medical College.

10. In 1860, a code of rules was drawn up for all classes of the Medical College with respect both to education and discipline, in accordance with the regulations of the University of Calcutta, under which the students were divided into four classes:—Class I, the 'Primary and Ceylon classes,' taking the full university curriculum of five years; and three classes each pursuing a three years' course: Class II, the 'Apprentice Class'; Class III, the Hindustani Class; and Class IV, the Bengali Class. The curriculum for classes III and IV was the same and the diploma of L. M. and S. was con-

[1] The power to confer additional degrees in medicine was conferred under an Act passed in 1860.

ferred on successful candidates at the conclusion of the course, which did not include midwifery.

11. In 1864 it was decided to make the Bengali class consist of two divisions, a lower one, the 'Native Apothecary class,' and a higher one, the Vernacular Licentiate class. The aim of the former was to train students for a certain class of appointments in Government service; of the latter, to educate in minor medicine and surgery a class of practitioners whose object was to qualify themselves for independent practice among the poorer classes. The Vernacular Licentiate class was opened at the beginning of the session 1866-7 In 1868, teaching in the diseases of women and children and midwifery and, shortly after, chemistry and medical jurisprudence were added to the curriculum of the latter class.

12. The Medical College gradually increased in size and became overcrowded. In 1873 the two vernacular classes taught in Bengali, the Native Apothecary Class and the Vernacular Licentiate Class, which then had together 823 students, were transferred to a new school established in connexion with the Campbell Hospital, a municipal hospital, at Sealdah, which was taken over by the Government. The Native Apothecary Class was shortly after abolished. In 1874 the Dacca Medical School was established in connexion with the Mitford Hospital, on lines similar to the Campbell School, with a view to serving the needs of Eastern Bengal from which more than one-third of the medical students came.[1] The Hindustani medical classes were discontinued at a date of which no record is available.

13. The establishment of the schools has led to a distinction in usage between the terms 'Medical School,' a medical teaching institution in which students are not trained for a degree, and 'Medical College', which is a university institution—a distinction which does not exist in the United Kingdom, where the term 'Medical School' is applied indiscriminately to all medical teaching institutions.

14. The Campbell Medical School and the Dacca School have both undergone important changes of three kinds since their first establishment. The course was lengthened from three years to four in 1896; the entrance qualification was gradually raised until in 1904 it was made to be the Calcutta matriculation; and the

[1] A school on the same lines was established in the same year at Patna, and another later at Cuttack, both of which were then in the Bengal Presidency.

schools have been gradually transformed from vernacular to English schools.[1]

15. In August 1914 a State Medical Faculty of Bengal was established in Bengal for examining the students of these schools, as well as other schools which might be recognised for the purpose by the Bengal Council of Medical Registration. The passed students are termed Licentiates of the State Medical Faculty of Bengal, a qualification registerable under the Bengal Medical Act of 1914. This Act established a Medical Registration Council and a Medical Register for the Province.

16. *Private medical schools.*—Besides the Goverment medical schools a number of private medical schools for the study of western medicine have been created both in Calcutta and Dacca.

17. The most important in Calcutta was the Calcutta Medical School established in 1884. Further particulars in regard to this school and the 'College of Physicians and Surgeons of Bengal,' started in 1897-8, and amalgamated with the Calcutta Medical School, are given in paragraph 51, under the heading 'Belgachia Medical College,' now affiliated to the Calcutta University up to the 1st M.B. standard. Of the other private institutions in Calcutta the 'Calcutta Medical Institution' (opened in 1897-8), the 'College of Physicians and Surgeons of Calcutta' (opened in 1904-5) and the 'College of Physicians and Surgeons of India' (opened in 1905) have all been closed. It is believed that all these institutions made arrangements for training some students in the vernacular. The passed students of the Calcutta Medical Institution received a diploma, V.L.M.S. (Vernacular Licentiate in Medicine and Surgery). A fourth private institution, the 'National Medical College of India' (opened in 1907) which has also conferred the title of V. L. M. S. on some of its passed students, is now endeavouring to raise its status to that required by the State Medical Faculty.

18. The private medical institutions at Dacca are:—

(1) The 'Dacca School of Physicians and Surgeons' (established in 1907) incorporated into the 'Dacca Medical Institute.'

(2) The 'College of Medicine and Surgery, Dacca.'

(3) The 'College of Physicians and Surgeons, Dacca.'

[1] See para. 52 (*c*) of this Chapter, footnote 2.

It is understood that they provide arrangements for training students in the vernacular.

19. It will be seen that throughout the history of medical education from its earliest history in Bengal, in Government and private institutions alike, the tendency has been to replace the vernacular as a medium of instruction by English.

20. But a further step has been taken recently with regard to vernacular medical teaching. On the motion of Dr. M. N. Banerjee in the Imperial Legislative Council, on 9th March 1916, the following resolution was accepted by Government :—

"That this Council recommends to the Governor General in Council that local Governments be asked to consider the advisability of establishing institutions for the purpose of giving medical students a special course of training conducted in the vernaculars so as to qualify them for ordinary medical practice in rural areas, and of encouraging and assisting deserving private enterprise to provide such medical education."

21. The matter has been referred to the local Government and by them to the Bengal Council of Medical Registration.

22. The Council of Registration were unanimously agreed that there was a dearth of western medical aid in Bengal and that it was desirable to extend the facilities for medical relief in rural areas. They were also unanimously of opinion that apart from the question of lower qualifications it was advisable to increase the number of students at the Campbell and Dacca Medical Schools and that other schools of a similar standard should be started as opportunity arose. The Council by a majority opposed the proposal to establish institutions for training medical students through the medium of the vernacular on the ground that such a step would be retrograde and impracticable. We understand that the State Medical Faculty of Bengal has adopted views similar to those of the Council of Registration.

23. The question of medical training in the vernacular has always been complicated by the difficulty of providing suitable text-books. It is clear that for some time to come at any rate no medical practitioner could keep up to date in his subject without a knowledge of a European language.

24. The Bangiya Sahitya Parishad of Calcutta recently put forward for the consideration of Government the following proposals for imparting instruction in the medical schools through the medium of the Bengali language, *viz.*, (1) that Bengali be used as the medium of instruction in the Campbell and other medical schools in Bengal :

(2) that Bengali text-books be prescribed for study in these schools: (3) that at the examination students be required to write their answers in Bengali in all subjects; and (4) that if it be impossible to introduce the above system into the Campbell and Dacca Medical Schools, at least two new and well equipped schools be established in Calcutta and Dacca to impart medical education through the medium of the Bengali language. Government have not accepted the proposals of the Parishad but stated that they would be prepared to assist as far as possible any well considered measures which would encourage the growth of a Bengali literature in medical science.

25. One of the difficulties connected with medical education in Bengal is that the fully qualified medical practitioners tend to congregate in the few more important towns, while the country districts are in want of skilled medical assistance, and yet unprepared to pay the fees demanded by a practitioner who has taken a medical degree or even a diploma from a medical school.

26. In speaking in the Imperial Legislative Council on Dr. M. N. Banerjee's motion quoted in paragraph 20 above, the late Sir Pardey Lukis, then Director-General of the Indian Medical Service, said that he was informed that especially in Bengal there was a steady and increasing demand for medical men of a somewhat lower standard than that of the sub-assistant surgeon;[1] that it was urged that there should be secured for the rural areas a class of practitioners corresponding very closely to the old type of native doctor, which had now practically disappeared; that, in support of the demand, it was urged that the income obtainable from private practice in a village was not sufficient to attract either an assistant surgeon or a sub-assistant surgeon,[2] or at any rate not a highly trained one. Sir Pardey Lukis added that he constantly received complaints that in the large towns there were already far too many practitioners.

27. In considering what provision should be made for the expansion of medical education (and especially the question of establishing a medical college at Dacca) the facts reported by Sir Pardey Lukis

[1] The title of 'Sub-Assistant Surgeon' is conferred on passed students of the medical schools (not colleges) who enter Government service.

[2] The title of 'Assistant Surgeon' is as a rule only conferred on medical men who have graduated.

must seriously be taken into account. It will be seen from figures given in paragraphs 50 (*c*), 52 (*c*) and 53 (*b*) that there is great pressure for admission both at the Calcutta Medical College and at the medical schools and, at the Belgachia College, the number of applications exceeds the space available. There is similar pressure on the law classes although it is a matter of common knowledge that the legal profession is overcrowded. The number of openings in Bengal is so limited at present that students crowd into the professions in which there are great prizes, although the number of those prizes may be relatively small and the number of disappointments great.

28. We think, however, that the present state of things may prove to be only temporary. The spread of education will increase the demand for more skilled assistance; and we hope that by combination, villages and rural organisations, such as District Boards, will be able by joint action to guarantee salaries which will secure the services of medical men who would be otherwise unwilling to settle outside a town.[1]

29. The situation may be summarised as follows:—The Medical College at Calcutta and the two medical schools, the Campbell Medical School and the Dacca Medical School, are full; the better trained medical practitioners congregate in the towns, leaving the rural areas in want of skilled medical assistance; there is a demand by Dr. Banerjee and others for vernacular schools in which men of a humbler type than those produced by the schools shall be trained; the Bengal Council of Medical Registration are divided in regard to the matter, but by a majority recommend that the rural demand shall be met by an expansion of the kind of education given in the schools.

To this we should add that the Dacca University Committee recommended that a medical college should be established at Dacca, preliminary and intermediate university classes only being established in the first instance, and that the proposal was accepted by Government, but that it was postponed owing to the financial stringency of the war.[2]

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[1] A suggestion on these lines was made by Lieutenant-Colonel E. A. R. Newman, Principal of the Dacca Medical School, when Dr. M. N. Banerjee's resolution was considered by the Bengal Council of Medical Registration.

[2] We shall discuss the future of medical education at Dacca in greater detail in Chapter XXXIII.

30. We have dealt in previous paragraphs with the question of giving western medical education in the vernacular. The question of Ayurvedic and Unani medical education (see paragraphs 1—3 above), which is naturally given in the vernacular, stands on an entirely different footing. We have received a number of suggestions from our correspondents that the University should take account of these systems in various ways.

31. "The University," says Mr. Manmathanath Banerjee,[1] Lecturer on Experimental Psychology in the University College of Science, "should not ignore the claims of indigenous systems of medicine, the Ayurveda and Unani, prevalent in the country. The University should do something to stimulate the proper study of the literature on these subjects under recognised masters. There is much scope for study, improvement, and research in these directions." Rai Mahendra Chandra Mitra Bahadur recommends special Government grants for the establishment and maintenance of Ayurvedic colleges.[2] Sir Gooroo Dass Banerjee suggests that the active principles and modes of action of remedies which have stood the test of experience for centuries require investigation by scientific methods and that the study of the systems should be encouraged by the University.[3] Mr. J. Borooah, Barrister-at-law, suggests that the University should confer doctor's degrees in the Ayurvedic and Hakimi systems of medicine and says that "it is a pleasing sign of the times that some of the doctors from the Medical College, Calcutta, are taking to the Ayurvedic system of treatment."[3]

32. Six Ayurvedic doctors of Calcutta forwarded a petition to the Commission asking us to recommend the establishment of a separate 'Ayurvedic Board' as a preliminary step towards the proper study of and researches in the Ayurvedic system in the University.[4] In accordance with a request contained in the petition, one of the signatories (Kaviraj Jamini Bhushan Ray) gave evidence before us.

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[1] Question 1.

[2] Question 1. In his answer to Question 6, this witness suggests that Ayurvedic medicine should be within the province of the University.

[3] Question 6.

[4] General Memoranda, page 104.

33. Four of our members visited the 'Hindu Medical College,' an institution for teaching Ayurvedic medicine in Furriapookur Street, Calcutta.

They were informed that there was a five-year course and that the students, of whom 22 were present during their visit, were mostly the sons of *Kavirajes*. Their ages varied from 17 to 20. Anatomy is taught by means of animal dissections. The whole of the course is conducted in Bengali. The students are trained to prepare Indian medicines. There is a materia medica collection, a small library, and a small botanic garden. The accommodation and equipment are insufficient for medical teaching according to modern methods.

34. Hakim Masihur Rahman[1] drew our attention to the following resolution of the Reception Committee of the All-India Muhammadan Educational Conference:—

"That this Conference urges upon the Government of India the desirability of reviving and popularising the Unani system of medical education which has been so useful in dealing with the tropical diseases and of establishing Unani medical colleges at least in the Presidency towns."

35. The President of the Standing Committee of the 'All-India Ayurvedic and Unani Tibbi Conference,' H. M. Ajmal Khan, Haziq-ul-Mulk, has communicated to us a copy of a letter of March 15th, 1918, addressed by him to the Home Member of the Government of India, communicating to him a number of resolutions of the Conference, including the following:—

"Government should be pleased to take steps to improve the ancient systems of medicine and to place them on a scientific basis."

We understand that the Government of India is considering the matter.

36. So far as we are aware, the Punjab University is the only Indian university which subsidises the teaching of Ayurvedic and Unani medicine. The teaching was formerly given under the auspices of the University itself in connexion with the Oriental College and for a time some teaching in anatomy was given at the Lahore Medical College to the students of these classes. The Ayurvedic classes were transferred to the Dayanand Anglo-Vedic College, and the Unani classes to the Islamia College, in 1898-9, and the University makes grants for their maintenance, Rs. 1,800 for the Ayurvedic and Rs. 1,200 for the Unani classes, on condition that

[1] General Memoranda, page 196.

the staff shall be appointed subject to the approval of the University.[1]

37. Some details in regard to these classes may be of interest.

At the D.A.V. College there are two two-year courses, a *Kaviraj* course, and a *Vaid Wachaspati* course. The total number of students on the rolls on 30th September 1917 was 21, of whom 13 were in the first year *Kaviraj* course, 6 in the second year *Kaviraj* course and 2 in the second year *Vaid Wachaspati* course. In April 1917, at the annual examination of the Ayurvedic classes, 16 students presented themselves for the *Kaviraj* examination, of whom 2 were successful and 2 were 'placed under compartment'; 1 candidate for the *Vaid Wachaspati* examination was successful. The official report states that 'books dealing with pathology, pharmacy, materia medica, anatomy, physiology, midwifery, chemistry, and physics were taught'; and that 'besides arrangements for practical work in the college a charitable dispensary was started in a hired building to give further practical training to the students. The dispensary had, however, to be closed after a few months.'

At the Unani classes at the Islamia College there were 65 students on the roll, with an average attendance of 52. The students include not only Musalmans, but also Hindus and Sikhs. In April 1917, 36 students appeared at the Hakim Haziq examination, of whom 18 were successful; 6 at the Umda-tul-Hukama examination, of whom 3 were successful; 4 at the Zubda-tul-Hukama examination, of whom 1 was successful. The college also examined 40 private students at the Hakim Haziq examination of whom 19 were successful.

38. We shall make recommendations in regard to the subject of Ayurvedic and Unani medicine in Part II of this report.[2]

II.—University questions.

39. We have given in outline a sketch of the historical development of medical teaching in Bengal with some indications of the general problems which require solution. In order to complete our survey we give below some further details in regard to university organisation in so far as it relates to medicine and medical degrees, the proposed post-graduate teaching in medicine, the two colleges connected with the University, the two medical schools at Sealdah and Dacca, and the question of teaching in dentistry.

40. We have recorded the establishment of the University in 1857 and the passing of the Act of 1860 which allowed it to increase the number of its medical degrees. The pre-requisite for entrance

[1] See Quinquennial Reviews on the Progress of Education in India, for 1897-98 to 1901-02, page 245; and for 1907-08 to 1911-12, page 205. The details of these classes are derived from the Annual Report of the Punjab University for the year ending 30th September 1917, and from information supplied by the Registrar of the University.

[2] Chapter XLIV.

to the course was raised at an early date from the matriculation to the first examination in arts; and the University for many years conferred two qualifications at the end of an undergraduate course of five years subsequent to the F.A. examination, the licence in medicine and surgery (which was not a degree), and the degree M.B. All the students[1] entered for the early examinations for both qualifications, the M.B. degree being an honours degree as compared with the license; but the larger majority only succeeded in obtaining the L.M.S.; thus in 1901-02, 64 took the latter degree and only two the former. In 1906 the L.M.S. was abolished[2] and the duration of the course was extended to six years so as to give three complete years for the final studies. At the same time the matriculation was substituted for the first examination in arts as an entrance qualification for the degree course; and in addition to the one higher degree of M.D. there were instituted the degrees of M.O. (Master of Obstetric Medicine), M. S. (Master of Surgery) and the D.P.H. (Diploma of Public Health).

In 1913 Colonel Harris, at that time the Inspector General of Civil Hospitals, Bengal, with the concurrence of Lieutenant-Colonel Calvert, Principal of the Medical College and Dean of the Faculty of Medicine, brought forward a proposal to reinstitute the L.M.S. examination with a five years' course. This was intended to be of a slightly lower standard than the six years' course for the M.B. examination, but of a higher one than the course followed in the Campbell Medical School and other like institutions.[3] The Faculty of Medicine was unanimously in favour of the institution of an examination on a lower level than the M.B. The majority were strongly in favour of a standard more or less identical with that of the old five years' L.M.S.; a minority of two was in favour of a lower standard. The Syndicate unanimously accepted the opinion of the majority of the Faculty, and the view taken by the Syndicate was accepted by the Senate by a majority of 28 against 7. The scheme for the re-institution of the L.M.S., based on a five years' course was submitted to the Government of India on the 2nd June 1913; but on the 2nd

[1] According to the Quinquennial Review on the Progress of Education in India for 1902-03 to 1906-07, page 161.

[2] The last L.M.S. examination was held in 1913 (information furnished by the officiating Registrar).

[3] See paras. 12 and 13 above.

April 1914, the Government of India refused to sanction the proposals on the ground that the local Government contemplated the institution of a new set of medical examinations.[1]

41. The regulations for the Calcutta degree are planned on the same general lines as those for the London degree though they are not identical in every detail. The minimum length of the course is six months longer than the minimum length of the London course (5½ years).

42. The permission to begin the medical course after matriculation has become almost a dead letter at both the medical colleges. The number of matriculates admitted to the Calcutta Medical College in 1914-15 was 19; in 1915-16 and 1916-17, there was only one matriculate; in 1917-18, there was none; and none has been admitted for 1918-19. The figures for the Belgachia College are as follows:—In 1916-17 there were 14 who had passed the matriculation or its equivalent out of 62 admitted; in 1917-18, there were 21 such candidates admitted out of 117; and in 1918-19, only one out of 125.

Thus nearly all students now take an intermediate or a higher examination before beginning their studies at a medical college; and in the present condition of secondary education in Bengal we regard this as desirable.[2] Indeed Lt.-Col. Calvert, Principal of the Medical College, informed us that past experience showed that students entering as matriculates have generally failed and so blocked the way for other students (owing to the regulation under which a student who fails is obliged to take his course in the subject in which he has failed over again).

43. The subjects are distributed between the successive years and examinations of the curriculum as follows:—

The first year is devoted to the preliminary subjects—physics, inorganic chemistry, botany and zoology; these subjects are taken at the preliminary scientific M.B. examination.

The second and third year are devoted to organic chemistry, anatomy, physiology, and pharmacology including materia medica and pharmacy; these subjects are taken at the 1st M.B. examination.

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[1] See para. 15 above.

[2] Of the students admitted to the Calcutta Medical College in 1918-19, 42 had taken the B.Sc. degree, 9 the B.A., and 1 the M.A.

The fourth, fifth and sixth years are devoted to the 'major subjects,' or Part I, and the 'minor subjects,' or Part II, as follows :—

Part I—

(1) Medicine (including therapeutics, special pathology and mental diseases).
(2) Surgery (including ophthalmology).
(3) Midwifery and gynæcology.

Part II—

(4) General pathology (including bacteriology and parasitology).
(5) Medical jurisprudence.
(6) Hygiene.

The examinations in Parts I and II form the final examination. Parts I and II may be taken separately or together. Part I must be passed as a whole ; but a student who fails in not more than two subjects of Part II may be re-examined in the subject or subjects in which he has failed within six months of the date of failure.

44. There are certain exemptions which might for a number of students shorten the medical course in theory. Students who have passed an intermediate examination in one or more of the subjects of the preliminary scientific examination are excused attendance at the courses for the examination and at the written part, but not at the practical and oral, as there is no practical test at the intermediate examination.[1] We were informed that the exemption is inoperative in practice both at the Calcutta and the Belgachia Medical Colleges as far as any shortening of the course is concerned. At both colleges students whose entrance qualification is the I.Sc. examination, take the whole preliminary scientific course in all the subjects.

Students who have taken the B.Sc. examination with any of the subjects of the preliminary scientific examination are exempted both from the course work and examination in such subjects. Sir Nilratan Sircar has suggested that a practical examination should form part of the examination in each of the subjects for the intermediate, and that the course in medicine after the intermediate stage should be reduced to five years.[2] Dr. Bimal Chandra Ghosh also recommends that the course should be one of five years after

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[1] The syllabuses for the two examinations are not identical ; thus in chemistry only seven metals appear in the I.Sc. syllabus, whereas there are more than 20 in the preliminary scientific syllabus, of which a knowledge is required both for the practical and oral examinations.

[2] Question 8.

the intermediate stage,[1] and makes other suggestions in regard to the curriculum.

45. The following regulations for the conduct of medical examinations extracted from Chapter XXV of the regulations are of especial importance :—

"3. A Board of Examiners consisting of two or more persons shall be appointed by the Syndicate, whenever practicable, to set papers in each subject in each examination. The Dean of the Faculty of Medicine for the time being shall be *ex-officio* President of each Board. Each paper shall, whenever practicable, be set by two members of the Board in consultation. In the case of a difference of opinion arising between two examiners, the point shall be referred to the President. The papers set shall be moderated by him in consultation with the other members of the Board.

4. As far as practicable, the members of the Board who set the papers shall be among those who look over the answer-papers.

5. Of the persons appointed to set papers in any subject for any examination, one at least must be a teacher or professor in that subject, and one at least, whenever available, shall be a person not teaching that subject for that examination.

6. Every oral, practical and clinical examination shall be conducted by two examiners jointly."

46. The medical regulations and courses of study are framed on the advice of the Board of Studies in Medicine which is elected annually by the Faculty of Medicine. The Board consists of twelve members, a number which seems hardly large enough to deal with the large number of subjects included in the medical curriculum.

47. Sir Leonard Rogers[2] drew our attention to the fact that the number of medical representatives on the Syndicate and Senate is relatively small; and suggested that when a medical member goes on long leave the person officiating for him should automatically take his place on the Senate. The defect of organisation pointed by Sir Leonard Rogers is a real one though the automatic replacement which he suggests is perhaps not the only remedy. We shall deal with the subject in our general recommendations.

48. *Post-graduate work.*—Under section 2 of Chapter XI of the university regulations it is provided that 'post-graduate teaching in Calcutta shall be conducted only in the name and under the control of the University.' But this applies only to arts and science; no post-graduate teaching has been provided in medicine, nor would it be easy for the University to provide it, except in such a subject as the history of medicine, as it has not the neces-

[1] General Memoranda, page 195.

[2] *Ibid.*, page 198.

sary laboratories or clinical material at its disposal. Lt.-Col. Calvert[1] stated in evidence with reference to the Calcutta Medical College that the present college staff is so busy with 'graduate' work that it cannot cope with post-graduate work. The Belgachia College appears not yet to be in a position to undertake such work. It is a striking fact that, with clinical material probably second to none in India, there should be no post-graduate teaching in Calcutta.

49. *Proposed Tropical School of Medicine.*—The defect will be to some extent remedied by the creation of the School of Tropical Medicine which has been erected in the compound of the Medical College (although it will not form part of the college organisation) and which is now ready to be opened. Sir Leonard Rogers, to whose brilliant work in tropical medicine and personal efforts the creation of the school is mainly due, stated that the School would constitute the first real attempt to give post-graduate medical teaching in India, and that its primary objects would be to conduct research and give post-graduate teaching in tropical medicine and hygiene; there are to be five or six professors in the Tropical School and a special institute for hygiene with two additional professors. Each professor in the school is to have liberal time for research but is to do some teaching. A sum of Rs. 60,000 a year for five years has been promised to the Tropical School by commercial associations to defray the cost of three additional whole-time European research workers with Indian assistants.

III.—Medical institutions in Bengal.

50. *The Calcutta Medical College.*[2]—This College, which is the oldest and the largest medical college in India,[3] stands in reputation second to none. The majority of the chairs are held by officers of the Indian Medical Service, and owing to the opportunities for private practice in Calcutta, these teaching posts are regarded as the most desirable positions in the province. We give below a brief description of the College and its activities.

[1] General Memoranda, page 197.

[2] The title we have given is that usually given to the College, even in Government publications, but the official title is the Medical College of Bengal. Much of the information in regard to the College set forth in the following sections has been either derived from the annual reports on the college for the years 1914-15, 1915-16, 1916-17 or supplied by the courtesy of the principal.

[3] See para. 5.

50. (*a*) The present Medical College stands on a site of about 25 acres, to the west of College Street, in the immediate proximity of the Presidency College and of the university buildings. Besides the College the following buildings have been erected on the site:—

(1) the Medical College Hospital, opened in 1852-3, with 320 beds, for medical and surgical cases; (2) the Eden Hospital, with 105 beds, for gynæcological cases; (3) the Prince of Wales's Hospital, with 88 beds, for aseptic surgery; (4) the Eye infirmary, with 51 beds; (5) the Paying Patients' Block, with 12 beds; (6) the Cholera ward, with 20 beds; (7) the Ezra Hospital, with 20 beds, for Jewish patients. Total, 616 beds.

(*b*) *Classes and number of students.*—The College admits two classes of students to medical courses—

(1) Regular students, male and female, of whom the majority are pursuing the university course and a small number the course for State Medical Faculty.

(2) 'Military Students' who pursue a special course in accordance with the requirements of the military authorities.

Casual students may also be admitted to study selected or isolated subjects but the number of these is very small.

There is also a class for *dhais* (midwives) and one of the largest training schools for nurses in India.

We have here only to deal with the regular students.

(*c*) *Admission of students.*—The nominal minimum qualification for admission is the Calcutta matriculation but as we have seen in paragraph 42 above, the actual minimum standard is the I.Sc. examination. Preference for admission is usually given to candidates who have superior qualifications, but the final selection lies entirely with the principal. Of the total number admitted twelve candidates who have passed the I.A. or I.Sc. examination are nominated by the Inspector General of Civil Hospitals, Bihar and Orissa, and six candidates, similarly qualified, by the Inspector General of Civil Hospitals, Assam. The Government of Bihar and Orissa nominates in addition six scholars who may be matriculates. There is a Government rule (not printed in the Calendar) that 25 per cent. of the places are to be reserved for Musalmans. We understand that some difficulty arises in the comparison of the claims of Muslim students who are matriculates with those of non-Muslims who have taken the I.A. or I.Sc. or higher examinations.

The number of candidates admitted (for the university course) to the college is stated in the University Calendar to be generally about 120, but the Principal may at his discretion decrease or increase this number. The number of applicants is always many times the number of vacancies. Thus in 1914-15 there were 702 applications and 154 admissions; in 1915-16 the corresponding numbers were 720 and 162; in 1916-17, 707 and 167; in 1917-18, 830 and 164. For the session 1918-19 there were, we are informed by the principal, 887 applications for 142 vacancies, apart from 18 students sent by the Government of Bihar and Orissa and 7 by that of Assam. The College is absolutely full.

(*d*) *Female students.*—There are at present (1919) 17 women students in the College. All women students are bound to reside in the Surnomoyee Hostel attached to the college, unless specially permitted to reside with friends or relatives outside the college. A decision of the local Government to decline to admit any further entries of women students at Calcutta, based on the view that it was preferable in their own interests that they should go to the Hardinge Medical College for Women at Delhi, has been recently reversed.

(*e*) *Fees.*—There is an admission fee of Rs. 20 and an annual fee of Rs. 125 payable in two instalments. Half the annual fees of Musalman students are paid out of the Mohsin fund provided that the total sum falls within the amount annually allotted to the college.[1]

Female students pay no fees.

(*f*) The following table gives statistics in regard to the examinations of the regular students of the Calcutta Medical College during the session 1914-15 to 1916-17 and is taken from the official report on the school for 1916-17 :—

[1] The numbers of Muslim students in the sessions 1914-15, 1915-16, 1916-17 and 1917-18 were 21, 30, 33 and 46 respectively. The number in 1918-19 is 56.

Description of examination.	1914-15.				1915-16.				1916-17.			
	Male.		Female.		Male.		Female.		Male.		Female.	
	No. appeared.	No. passed.	No. appeared.	No. passed.	No. appeared.	No. passed.	No. appeared.	No. passed.	No. appeared.	No. passed.	No. appeared.	No. passed.
1	2	3	4	5	6	7	8	9	10	11	12	13
Preliminary Membership, State Medical Faculty	..	..	..	..	5	2	..	..	1	1	..	..
Intermediate Membership, State Medical Faculty	..	..	..	..	14	8	..	..	15	7	..	..
Final Membership, State Medical Faculty	..	..	..	..	..	..	..	..	4	1	..	..
Preliminary Scientific M.B.	182	125	6	3	190	151	5	5	206	154	..	..
First M.B.	244	90	7	5	296	130	6	4	265	150	4	4
Second M.B.	109	59	3	2	173	97	3	2	185	80	1	1
Honours in Medicine	..	..	..	..	..	..	..	..	..	..	..	..
Doctors in ditto	..	..	..	..	2	2	..	..	..	..	..	..
Total	535	274	16	10	680	390	14	11	676	393	5	5

(*g*) There are chairs in the following subjects :—
botany and zoology (1 chair); chemistry; physics; general anatomy and physiology (1 chair); descriptive and surgical anatomy; materia medica; pathology; medicine; surgery; midwifery; medical jurisprudence; ophthalmic medicine and surgery; dentistry and dental operations (1 chair); clinical medicine (combined with chair of materia medica); hygiene.

(*h*) There are lectureships in the following subjects :—
practical pharmacy; practical surgery and bandaging; clinical methods.

(*i*) There are assistant professorships in the following subjects :—
biology; physics and chemistry (one assistant professorship for the two subjects); anatomy; physiology; pathology.

There are demonstratorships in the following subjects :—
anatomy (4); physiology (3); biology (3); pathology including bacteriology (2); physics and chemistry (3).

There appear to be no special posts for pharmacology or bacteriology.

(*j*) *Laboratories and dissecting room.*—There is an admirable dissecting room, a large physiological laboratory for teaching purposes (but with comparatively little accommodation for research) and an excellent pathological department recently erected. The accommodation for the preliminary sciences is not altogether satisfactory. There is a fine biological laboratory capable of accommodating 106 students on the ground floor of the Tropical School of Medicine; but there is only a single, and not very well equipped, laboratory for physics and chemistry.

The principal of the college recognises the fact that the provision for teaching the preliminary medical subjects is inadequate and has stated in his evidence that he thinks provision should be made for the teaching elsewhere.[1]

(*k*) *Government of the college.*—Section I of the rules and regulations of the college are printed as an appendix to this report. The most important rules are the first two of Section I, which read as follows :—

(1) The government of the Medical College and Hospital is vested in the principal aided by a consultative council

[1] Oral evidence Lt.-Col. Calvert.-General Memoranda, page 197.

composed of all the professors, subject to the general control of the Surgeon-General with the Government of Bengal.[1]

(2) The Council shall take cognisance of all matters which in any way concern the constitution and work of the college and the welfare of the students attached thereto.

(*l*) Our attention was called to the fact that the Council rarely meets. Sir Leonard Rogers[2] expressed the view that the Council of professors should have greater powers and scope, and that at present 'the Council scarcely exists except in name.'

(*m*) In regard to the position of the principal, Lt.-Col. Calvert,[3] who has carried out his duties with great efficiency and has reached the age of retirement, gave the following evidence :—

"The witness is principal, professor of medicine, undertakes consulting practice, and is responsible for the management of the hospital. The work is heavy, but under existing conditions it is difficult to see how the pressure can be relieved. Devolution of responsibility is difficult in India, as there must be a head of an institution whose decision is final. The principal again must teach; otherwise he will lose contact with the students. He must also administer the hospital as there are many points of discipline which can only be attended to effectively by the principal. The principal, however, might be relieved of the necessity of taking consulting practice by the payment of an adequate salary."

We know of no medical school outside India in which so heavy a burden is imposed on the responsible head.

(*n*) *Staffing of the Calcutta Medical College.*—It was pointed out to us that the staffing of the college mainly by members of the Indian Medical Service has advantages and disadvantages. Colonel D. W. Sutherland of Lahore pointed out to us that the recruitment for the Indian Medical Service would undoubtedly suffer if the medical chairs were thrown open, as the chairs in the provincial capitals are regarded as the prizes in the service.[4] Sir Leonard Rogers shared his view, and stated that the service system enables leave vacancies to be filled satisfactorily and efficiently and that the acting appointments enabled the authorities to test the capacity of medical officers for teaching work.[2] Both Sir Leonard Rogers and Colonel Sutherland agreed in the view that the arrangements for securing specialists were open to improvement.

[1] Formerly the Inspector General of Civil Hospitals, Bengal.

[2] General Memoranda, page 198.

[3] *Ibid.*, page 197.

[4] See para. 50.

Under the existing system most of the clinical professors are not only permitted but required to take general practice, as Presidency Surgeons with Government departments to attend professionally; the professor of pathology is only allowed consulting practice; the professors of physiology, biology and chemistry are not allowed any practice other than laboratory examination of materials sent from private sources. On this point Sir Leonard Rogers said:[1]—

"The professors should also be real specialists in their own departments of study. This is scarcely possible under the present system under which the professors undertake general private practice. It would be better to pay adequate salaries and relieve professors from the necessity of taking any but consulting practice. Government will then have to employ other doctors to look after the needs of Government servants."

Colonel Sutherland pointed out that it was a weakness that under the present system specialists could not be transferred from one province to another, and suggested that medical education might be Imperial instead of provincial.

51. *Belgachia Medical College.*—Dr. M. N. Banerjee, the Principal of the Belgachia Medical College, has given us an account of the history and origin of this college, the first non-official medical college manned and managed entirely by Indians,[2] which we here briefly summarise. The institution from which the college has sprung was founded in 1886 by a number of Indian medical practitioners and was in the following January named the Calcutta School of Medicine. Its specified objects were to teach allopathy, homœopathy and, if necessity arose, Hindu medicine separately, and by separate teachers. Both allopathy and homœopathy were taught till August 1887, when the allopathic portion was made a separate school under the name of the Calcutta Medical School, with the object of teaching the western system of medicine only, as it was taught in the Government schools and colleges.

(*a*) The Albert Victor Hospital (named after His Royal Highness Prince Albert Victor)[3] was erected in the years 1899-1902 in connexion with the school. It was originally designed for 40 beds but in 1909 the number was increased to 100; Dr. Banerjee informed us that another hospital of 100 beds is to be erected in

[1] General Memoranda, page 198.

[2] *Ibid.*, page 356.

[3] The surplus of the fund raised for the reception of Prince Albert Victor in Calcutta in 1890, a sum of about Rs. 18,000, was devoted to the establishment of the hospital.

connexion with the college. In 1903 the school was removed to its present site at Belgachia, purchased out of the school funds. In 1904 the College of Physicians and Surgeons of Bengal, another private medical school, was amalgamated with the college. In 1911, a new movement was started for the development of the college which appears to have had the powerful support of Sir Pardey Lukis, Surgeon-General with the Government of India. After various discussions and conferences a scheme of Government assistance was devised which received the sanction of the Secretary of State early in 1915, and the Government of Bengal published an official resolution dealing with the matter on the 20th April 1915. The chief points in the resolution were the promise of the Government to make a capital grant of 5 lakhs for buildings and an annual grant of Rs. 50,000, on condition that the college should raise 2½ lakhs for equipment and should secure an annual grant of Rs. 30,000 from the Calcutta Corporation, and an annual grant of Rs. 10,000 from the University, and meet the remainder of the recurring cost from fees and endowments.

The Government was to nominate three members on a managing committee of eleven, and the appointment of the Superintendent of the Hospital was to be subject to their approval.

(*b*) The sum of 2½ lakhs has been raised by private subscription; the Calcutta Corporation promised the annual grant of Rs. 30,000; but the University found itself unable to make an annual grant of Rs. 10,000. Ultimately the condition of a university grant was waived, the Committee of the school representing that the income from fees would allow them to dispense with it. The college was formally opened by Lord Carmichael on July 5th, 1916.

(*c*) The question of affiliation to the University of Calcutta gave rise to certain difficulties, due to the financial position of the school, which have now been surmounted. Affiliation up to the preliminary scientific examination was granted in January 1916 and up to the first M.B. examination in June 1917. There seems every reason to hope that as the buildings and equipment and staffing progress the college will be able to obtain further affiliation so as to enable students to complete their medical course for the Calcutta degree in the college.

(*d*) The college is under the management of a society registered under the title of the Medical Education Society of Bengal,

with various powers enumerated in a Memorandum of Association. Under the terms of this memorandum the general management of the college and the hospitals attached to it are vested in a council of eleven members constituted as follows :—

(*i*) The President of the society, (*ii*) three nominees of the Government of Bengal, (*iii*) one nominee of the Corporation of Calcutta, (*iv*) three elected by the college and hospital staff from amongst themselves, (*v*) the Principal of the college (*ex-officio*), (*vi*) the remaining members to be elected by the members of the society from among themselves one of whom at least shall be a non-medical man.

(*e*) New buildings have been erected for the teaching of physics, chemistry, biology, physiology, anatomy (lectures) and materia medica ; they are also to provide accommodation for a library and a museum for the biological and materia medica departments. The only new departments fully equipped when the Commission visited the college were those of physics, chemistry and biology ; the provision in these departments is quite adequate for elementary teaching. We understand that the old building, which contains the offices, common rooms for men and for women students, principal's room, post-mortem room, and dissecting room is about to be remodelled so as to provide a more adequate dissecting room. There is at present no adequate department of pathology, and further provision for the teaching of clinical subjects will have to be made before the college is in a position to be affiliated in respect of the final degree examination.

(*f*) In August 1918 the total number of students was 275 including 3 female students. Of 101 students who presented themselves for the preliminary scientific examination in 1918, 63 passed.

52. *The Campbell Medical School, Calcutta.*—The foundation of this school, in 1873, has been explained in paragraph 12 above. The Medical School and Hospital, which are under the superintendence of Lieutenant-Colonel A. Leventon, I.M.S., occupy an area of between 25 and 26 acres on the east side of Upper Circular

Road. The hospital buildings include a number of separate blocks with 446 beds for general cases, and 184 beds for small pox. There is a special block for the Medical School.

(*a*) The control and management of the school are vested in the Superintendent of the School under the general supervision of the Surgeon-General with the Government of Bengal.

(*b*) The school provides instruction for medical students and for 'compounders' (dispensers). The number of students sanctioned for the medical classes has recently been raised from 350 to 500 (male and female) and in May 1918 there were 327 male students and 8 female. The number of students sanctioned for the compounder classes is 100 and in May 1918 these classes were full.

(*c*) *Conditions of admission.*—Male students are required to be 16 years of age and to have passed the matriculation examination of a recognised university or an examination accepted by the local Government as equivalent thereto. Students on admission are generally from 17 to 20 years of age. Female students must be over 17 years of age; the qualifications required in their case is of a somewhat lower standard. All women students (unless very exceptional exemption be given) reside in the Lady Elliot Hostel. When there are more candidates than vacancies preference is ordinarily given (1) to those who are natives of the Presidency and (2) to those who possess better educational qualifications. Of the 142 male students admitted or re-admitted in 1918, only eight had passed an intermediate examination and two a bachelor's examination in arts or science. Of the eight female students admitted, only a single candidate had passed the matriculation examination; the rest had passed examinations of a lower standard.

For the session 1917-18 there were 530 applications, and 117 admissions; the corresponding figures for 1918-19 were 868 and 150 (including 8 re-admissions).

The number of women students on the roll in 1915-16 was 21; in 1916-17, 18; in 1917-18, 14. The total number of students on the roll in November 1918 was 444, including 24 Muslim students and 15 women students.

(*d*) *Fees.*—Male students pay an entrance fee of Rs. 2 and a monthly fee of Rs. 4. Women students are admitted free.

(*e*) The course given at the school is that prescribed for the Licentiateship of the State Medical Faculty of Bengal.[1]

The course is a four-year course, given entirely in English,[2] and divided as follows :—

First year.	Second year.	Third year.	Fourth year.
Anatomy including Dissections.	Anatomy including Dissections.	Medicine.	Medicine.
		Surgery.	Surgery.
Physiology.	Physiology.	Midwifery and Gynæcology.	Midwifery and Gynæcology.
Chemistry and Physics.	Materia Medica and Practical Pharmacy.	Medical Jurisprudence.*	Hygiene.
Materia Medica and Practical Pharmacy.	Practical and Tutorial classes in above subjects.	Pathology.	Vaccination.
Practical and Tutorial classes in above subjects.		Hospital Practice.	Operative Surgery.
		Tutorial Clinics.	Anæsthetics.
			Hospital Practice.
			Tutorial Clinics.

*Failure to obtain 33 per cent. of marks in the school test examination necessitates repetition in fourth year.

The teaching in chemistry and physics is at present being given at the Calcutta Medical College, but Colonel Wilson in his oral evidence (given as Superintendent of the school) expressed the hope that it would soon be provided at the school.

(*f*) There are three examinations :—the primary examination in (1) chemistry and (2) physics ; the intermediate examination in (1) anatomy, (2) physiology and (3) materia medica and pharmacy ; and the final examination in (1) medicine, including medical pathology and therapeutics, (2) surgery, including surgical pathology and operative surgery, (3) midwifery and gynæcology, (4) medical jurisprudence and hygiene including vaccination.

[1] See Calendar of the State Medical Faculty of Bengal, 1918.

[2] The instruction was given at the Campbell School in Bengali until 1904. During a transition period both English and Bengali were used in the school ; since 1908, English only has been used ; and in 1911 the use of the epithet 'vernacular' was discontinued in connexion with the courses given.

(*g*) The examination statistics for the years 1915-16, 1916-17 and 1917-18 were as follows :—

Campbell Hospital Medical School.

Examinations of State Medical Faculty of Bengal.	SESSION 1915-16.				SESSION 1916-17.				SESSION 1917-18.			
	MALES.		FEMALES.		MALES.		FEMALES.		MALES.		FEMALES.	
	No. appeared.	No. passed.	No. appeared.	No. passed.	No. appeared.	No. passed.	No. appeared.	No. passed.	No. appeared.	No. passed.	No. appeared.	No. passed.
Primary . . .	117	100	4	4	79	65	2	2	124	95	3	3
Intermediate . .	115	77	2	2	96	64	5	2	116	89	4	2
Final . . .	97	56	7	2	92	73	9	7	77	52	1	1

(*h*) The staff consists of nine teachers, in the following subjects :—

(1) Chemistry and physics, (2) anatomy, (3) physiology, (4) pathology and hygiene, (5) medicine, (6) surgery, (7) midwifery, (8) medical jurisprudence, (9) materia medica.

(*i*) *Titles conferred on students of the school.*—The 'passed' students of the school were at first given the vernacular licence to practise medicine and surgery (V.L.M.S.). In 1899 their designation was changed to 'Hospital Assistant.' Since 1911, they have been designated 'Licensed Medical Practitioners' and those who enter Government service are known as 'Sub-Assistant Surgeons.'[1]

53. *The Dacca Medical School.*[2]—The foundation of the school, in 1874, has been explained in paragraph 12 above. Its constitution and regulations are, except in points of detail, identical with those of the Campbell Medical School. The school and the Mitford Hospital are under the superintendence of Lieutenant-Colonel E. A. R. Newman, M.D., I.M.S., the Civil Surgeon of Dacca.

(*a*) The school and hospital are placed on the north bank of the River Buri Ganga, between one and two miles south of Dacca College. The hospital site occupies approximately ten acres; and

[1] The title has been in use with somewhat varying connotations since 1838.

[2] Most of the information given in regard to the college is either derived from official documents or has been courteously supplied by the superintendent.

the number of beds is being increased from 160 to 233 by buildings now in progress. The Medical School occupies about three acres.

(*b*) The number of students in 1916-17 was 280 including two women, in 1917-18 about 268 including 6 women. In the session 1916-17 there were 175 candidates for admission, of whom 78 were admitted. Government has sanctioned an increase in the number of medical students up to 400 (including women students). It is estimated that the number of students in the first, second, third and fourth years will be about 125, 100, 90 and 85, respectively.

(*c*) In addition to the medical students there are 'compounder' students, of whom the maximum number is fixed at 100. In 1917-18 there were between 55 and 60 such students.

(*d*) The number of female students is not fixed. All the female students receive scholarships of which the amount was raised recently from Rs. 10 to Rs. 20 per mensem; there are 13 scholarships and the superintendent thinks the number of students is not likely to exceed this figure.

The women students all live in a special hostel. (There is no hostel for men students.)

(*e*) Since the beginning of the session 1917-18 the students have received their instruction in physics and chemistry at the Dacca College.

(*f*) The staff consists of the following in addition to the Superintendent and Deputy Superintendent (who take only clinical teaching) :—

(1-6) 'Teachers' in (*a*) anatomy, (*b*) physiology and pathology, (*c*) medical jurisprudence and hygiene, (*d*) medicine, (*e*) surgery, (*f*) midwifery and materia medica, respectively, (7) a senior demonstrator in anatomy, (8) a junior demonstrator in anatomy, (9) an anatomical assistant, (10) a demonstrator of pathology and physiology and (11) a demonstrator of midwifery and materia medica.

There is in addition a teacher for the 'compounders.'

(*g*) The school buildings include a lecture theatre accommodating 400, a smaller theatre, museums of anatomy, materia medica and pathology, a small bacteriological laboratory and a

well designed dissecting room. A new teaching laboratory for physiology with a simple equipment has just been provided.

(*h*) The examination statistics for the years 1915-16 to 1917-18 were as follows:—

Dacca Medical School.

Examinations of State Medical Faculty of Bengal.	SESSION 1915-16.				SESSION 1916-17.				SESSION 1917-18.			
	MALES.		FEMALES.		MALES.		FEMALES.		MALES.		FEMALES.	
	No. appeared.	No. passed.	No. appeared.	No. passed.	No. appeared.	No. passed.	No. appeared.	No. passed.	No. appeared.	No. passed.	No. appeared.	No. passed.
Primary—												
Regular Examination	122	88	1	..	69	56	..	..	54	48	3	3
Re-examination .	..	..	..	..	25	21	1	1	11	9	..	..
Intermediate—												
Regular Examination	70	28	1	..	62	43	..	..	63	45	..	..
Re-examination .	..	..	..	..	35	25	1	1	24	18	..	..
Final—												
Regular Examination.	6	..	..	..	53	28	1	1	27	17	..	..
Re-examination .	..	..	..	..	7	7	..	..	20	19	..	..

54. *Teaching of dentistry.*—We were much struck by the absence of any school of dentistry in Calcutta and on further enquiry ascertained that no such school exists throughout India. The Surgeon-General with the Government of Bengal has been good enough to place certain information at our disposal in regard both to the existing situation and the proposals that have been made in the past with a view to remedy it.

55. There is an out-patient dental department in the Medical College Hospital at Calcutta, mainly limited to 'emergency work.' The surgeon-dentist of the hospital attends twice weekly. Attendance at the dental department is optional for university students, though compulsory for the military pupils.

56. Mr. J. Hardy Taylor (now Professor of Dental Surgery in the Calcutta Medical College), when officiating as professor in 1906, drew up an elaborate scheme for the foundation of a dental hospital in Calcutta and for the establishment of a dental diploma. Mr. Taylor stated that there were a number of Indians practising dentistry in Calcutta, who had learned all they knew about the subject by picking up their knowledge where they could, though some had no doubt based their knowledge on the

theoretical lectures given in the Medical College. Mr. Taylor stated that many men who had passed out of the Medical College had asked him how they could acquire the knowledge necessary to enable them to practise dental surgery and he had had to reply that there was no institution whatever to meet the case. "India," he wrote, "is an immense country with a very large population large numbers of which suffer from dental trouble and there is not even one properly constituted dental hospital in the whole country."

57. The scheme included the establishment of a dental hospital designed for the simultaneous treatment of 15 patients and of a dental laboratory of which the equipment was to cost about £760.

The staff of the hospital (including a resident dental surgeon, two qualified assistant dental surgeons, one unqualified assistant and a ménial staff of 8 persons) was to cost Rs. 26,730 or (£1,782) annually; and Mr. Taylor estimated the total cost per annum, including an allowance for the use of materials and the depreciation of equipment at £2,306, initial cost said to be £3,527 (exclusive of building). As a *per contra* he reckoned the payment by those patients who could afford it, of £467 approximately, for materials; and £10 a year as an inclusive fee from each student.

58. Mr. Taylor suggested the establishment of a four years course for a 'License in Dental Surgery,' of which he sketched out details under the following heads:—

(*a*) Preliminary Examination and Registration, (*b*) Professional study, (*c*) Professional Examination.

(*a*) *Prelimininary Examination and Registration.*

(1) The preliminary examination in general education was to be a high school or some equivalent examination for European students and the F. A. examination for Indian students, or some examination which would ensure a general education with a knowledge of English.

(2) The student after passing such preliminary examination was to be registered as a dental student and his professional study to begin subsequently to the date of his registration.

(*b*) *Professional study.*

This was to be spread over "a period of four years, which later might be increased with very great advantage to five years." It was to be divided into two periods of two years each, the first period to be occupied by—

(1) dental laboratory tuition (mechanical dentistry), (2) a course of lectures in chemistry (inorganic only), (3) a course of practical

chemistry (inorganic only), (4) a course of lectures in anatomy, (5) a course of lectures in physiology, (6) a course of dissections ;

and the second period to be devoted to—

(1) a course of lectures in general surgery, (2) clinical surgery, (3) a course of lectures in dental anatomy and physiology including comparative dental anatomy, (4) a course of lectures in dental surgery, (5) a course of lectures in dental mechanics, (6) two years' practice in the dental hospital.

(c) *Professional Examinations.*

After the student had completed the first period of two years he was to pass the first professional examination, before being allowed to proceed with the second period of study.

This examination was to comprise—

(1) chemistry (unless the candidate was a B. Sc.), (2) anatomy, (3) physiology, (4) practical dental mechanics.

The final or second professional examination was to be taken after the completion of the full four years after registration and on the student attaining the age of 21, and was to comprise—

(1) general surgery, (2) dental anatomy and physiology, (3) dental surgery (written), (4) dental mechanics (written), (5) dental surgery (practical).

The student to be liable also, at the discretion of the Examining Board, to include practical dental mechanics with the written dental mechanics in this examination.

Having completed this examination the student was to be licensed to practise dental surgery.

59. The Examining Board was to consist of the staff of the hospital under the principal of the Medical College.

60. Mr. Taylor's scheme was favourably reported on in the first instance by Lieutenant-Colonel (afterwards Sir Pardey) Lukis, then principal of the Medical College, who even suggested that students trained at the Medical College should be required to have either matriculated or passed the I. Sc. examination. Lieutenant-Colonel Lukis objected to the erection of a dental hospital on the College hospital grounds, but suggested that it might be built as an annexure to Chuni Lal Seal's Dispensary.

61. Other schemes of a somewhat less ambitious nature were worked out and submitted with that of Mr. Hardy Taylor to the Government of Bengal and the Government of India in 1908; but they led to no practical result.

62. The question of establishing a school of dentistry was again raised in a question put at the meeting of the Commission on

February 26th, 1918, to Dr. (now Sir) Nilratan Sircar, who put down a motion on the subject at the Legislative Council for their sitting of March 13th and 14th. This question was withdrawn by Dr. Sircar, it is understood, owing to representations made to him that it would not be possible to establish a dental school with the necessary equipment and staff until after the war.

We shall deal with the question further in Chapter XLIV of this report.

63. We are greatly indebted to the medical authorities in Bengal and to the authorities of the medical colleges of Bombay, Lahore, Lucknow and Madras for their courtesy in supplying information on matters dealt with in this chapter.

CHAPTER XXIV.

Engineering and Mining Education.

1.—History of Sibpur Civil Engineering College and of general discussions on Engineering Education in Bengal.

1. The first provision for advanced engineering in Bengal was made in 1856, when the Public Works Department established a college at Fort William with the object of training Indian engineers and subordinates for their service. The college was affiliated to the Calcutta University in 1857, the year of its foundation; and in 1864, it was transferred to the Presidency College of which it constituted an important department.[1]

2. In 1869, Colonel J. E. T. Nicholls, Secretary to the Government of Bengal in the Public Works Department, reported that the theoretical education in engineering given at the Presidency College was excellent, but that 'the measures for imparting and ensuring practical knowledge' before the candidate entered on the practice of his profession were defective; and he pressed this point again in 1875.[2]

3. In January 1878 the Government of Bengal appointed a committee, presided over by Mr. A. Cadell, to consider and report on what measures it was desirable to take for the establishment of a technical school, to be connected with the workshops and manufactories of the Public Works Department of the Presidency; and also to consider whether it would be desirable to remove the civil engineering branch of the Presidency College to the neighbourhood of the practical training school, so as to work the two together as one institution for giving a complete technical

[1] Report on Technical and Industrial Instruction in Bengal, by J. G. Cumming, pages 11-12 (Bengal Secretariat Book Depôt, Calcutta, 1908). The first engineering college established in India was the well-known Thomason College, founded at Roorkee in the United Provinces in 1847 and opened in 1848. A history of the college up to the present date is printed in the college calendar.

[2] Technical Education in Bengal. Selected Papers—compiled by F. J. E. Spring (Bengal Secretariat Press, 1886), pages 18-23 and 24-27.

education and training for engineers.[1] Mr. (later Sir Alfred) Croft, Director of Public Instruction for Bengal, prepared for the Committee, of which he was a member, a detailed memorandum on the Education of Mechanics and Engineers[2] in March 1879. The Committee reported in the same year and recommended that the civil engineering branch of the Presidency College should be incorporated with the proposed institution, 'the whole forming one great technical school for the training of engineers and mechanics,' but that the theoretical and practical branches should be under entirely independent management, the supervision and control of the former resting with the Education Department, and that of the latter with the Public Works Department.[3]

4. The Government adopted the recommendation of the Committee and purchased the premises of Bishop's College, Sibpur, from the Society for the Propagation of the Gospel; and at the same time purchased adjoining land for the new workshops of the Public Works Department which were intended to serve both for the requirements of the Department and for the practical training of the pupils of the college.

The Committee had recommended that at the outset four classes of pupils should be trained :—

(1) Civil engineers, (2) mechanical engineers, (3) civil overseers, (4) mechanical overseers; together with two classes for draughtsmen, and for the improvement of skilled workmen respectively.

It is interesting to note that the Committee further recommended that students in classes (1) and (2) should present themselves for the corresponding university examination in their fourth year, but that no candidate after passing the examination should be admitted to a degree unless at the end of the fifth year he could produce a certificate from the principal stating that he had completed the full course of practical training. Government approved the recommendation for the institution of the classes enumerated above and added a class for the sons of artisans and *mistries*. The Government resolution instituting the college was dated

[1] *Loc. cit.*, page 64.
[2] *Loc. cit.*, pages 46-63.
[3] *Loc. cit.*, page 64.

December 15th, 1879,[1] and the Engineering College, Sibpur, was established in 1880. We are informed by the principal of the college that it was originally called the Government Engineering College, Howrah, and that it received its present title in 1887.

5. The civil engineering courses under heading (1) were affiliated to the University of Calcutta in May 1880. The mechanical engineering courses under heading (2) did not fill and were never started. The classes under headings (3) and (4) were amalgamated and have been generally known as the 'Apprentice Class,' a title now regarded by the staff as unsuitable and misleading as to their present character. The standard for admission to the University course was the matriculation; and a simple admission test was instituted for the apprentice class.

6. In 1887, the Public Works Department came to the conclusion that it was desirable to discontinue the maintenance of the workshops at Sibpur for their own constructional work. This conclusion led to the appointment of a committee by the Bengal Government for the purpose of suggesting any alterations in the course of studies pursued and the method of instruction adopted at the Sibpur College. It seems clear from the documents printed in the 'Papers relating to Technical Education in India, 1886-1904,' that the college was generally regarded at that time as a failure. Two distinct views as to its future were placed before the Committee.

7. Mr. F. J. E. Spring,[2] Under Secretary of the Public Works Department, wrote that 'one of the chief difficulties with which the College has had to contend in the past is that it has been nobody's child.' Its business was to train up officers and subordinates for the Public Works Department and to educate engineers and foremen for general employment, and it sent up a few men annually for university degrees. It was, as far as teaching was concerned, under the management of the Education Department; as far as manual work under the Public Works Department. But it received scant attention from the Education Department, was little known in the Public Works Department beyond the narrow circle of the Bengal provincial establishment, and few of the largest class of employers

[1] Bengal Government, Public Works Department, resolution No. 2310-E. of 15th December 1879.

[2] Letter of 24th July 1887 printed in papers relating to Technical Education in India, 1886-1904, page 45.

of engineering labour—engineers-in-chief and managers of railways—were even aware of its existence. Mr. Spring thought that one of the obstacles to the success of the college in attracting students to the engineer class was that if a man failed at the university examination at the end of his four years' course he had nothing to show for his training although he was for any technical employment, a far more useful man than the average B. A. or M. A. man. He suggested that the principal should be permitted to give a certificate to such students, if they satisfied him by examination or otherwise that they had fairly profited by their four years' course of training. But the point on which Mr. Spring laid most stress was that the college was not properly equipped.

"It is in my opinion," he wrote, "the highest folly that a great province like Bengal should have spent lakhs of capital and should go on incurring heavy annual expenditure on an institution which fails to thoroughly accomplish the object for which it was founded, such failure being in great part ascribable to the want of a small and judicious further expenditure upon the essential requirements of modern technical teaching ....To buy a three hundred guinea hunter, and then economise by giving him mouldy hay and stinting him in oats is sheer stupidity and that is precisely what has heretofore been done with Sibpur College."

8. The second view placed before the Committee was that of Mr. M. Finucane, Director of Land Records and Agriculture[1], who pointed out that between 1879-80 and 1887 the College had only produced 33 'passed engineers' and 68 passed subordinates or overseers, and that it would have been cheaper to send them to England for their education. In view of the cost he argued that Sibpur as an engineering college had 'completely failed.' Either, he said, there was no sufficient demand for the education and training provided for engineers and overseers in the college, or the demand was not met by the college as it was then constituted. He proposed that the college should be reconstituted as a general Technical College or College of Science and Art for Bengal, and that in addition to training in engineering it should provide training for managers and sub-managers of estates, tahsildars or land stewards, survey officers, veterinarians, accountants and possibly other callings.[2] His general idea was that it should

[1] *Loc. cit.*, page 39 *et seq.*

[2] It was probably due to the suggestion of Mr. Finucane that agricultural classes were established at Sibpur in 1899. For details in regard to these classes, which were discontinued in 1910, see Chapter XXV, para. 5.

form a central technical institution for Bengal with which local technical or industrial schools should be affiliated.

9. The Committee rejected the proposal for the conversion of the college into a general school for technical instruction though they thought that additional classes might be formed for the training of youths for callings for which special theoretical knowledge is required.[1] Further, the proposal to abolish the workshops was rejected by the Government of India who stated that "the Governor-General in Council attaches great importance to the maintenance and expansion of the college as a school of practical as well as of theoretical instruction, likely in time to develope into an institution for technical instruction in its highest sense." The Government of India referred at the same time with approval to a proposal to remove the college and workshops to the grounds on the left bank of the Hooghly formerly occupied by the ex-king of Oudh, so as to place them more in reach of the commercial community, in proximity with the Government Dockyard and the new docks, and in communication with all parts of India by railway; but this proposal appears to have dropped.[2]

10. The college seems to have become more popular after this Government enquiry, for we understand from the principal that by 1892, although the formal entrance standard remained, as before, the Calcutta matriculation, no candidate had a chance of admission unless he had passed the first examination in arts.

11. In 1890, Mr. E. W. Collin, by direction of the Government of India, drew up a report on the arts and industries of Bengal,[3] which contains certain comments and suggestions in regard to the Sibpur College. Mr. Collin stated that the papers furnished to him (probably those referred to in paragraphs 8 and 9) showed that the upper class for the training of civil engineers had

[1] They obviously had in mind only the idea of a school for workmen, for they write:—"The Committee does not consider that the extension of the College at Sibpur as a general school of technical instruction is practicable. In its opinion such schools, to be successful in India, must be established in large trade centres, offering as a free gift general means of instruction to the workmen employed in neighbouring factories." Papers relating to Technical Education in India, 1886-1904, page 38.

[2] Letter from the Government of India to the Government of Bengal of 13th July 1889, printed in Papers relating to Technical Education in India, 1886-1904, page 49. See also Technical and Industrial Instruction in Bengal, 1888-1908, (Part I of Special Report) by Mr. J. G. Cumming (Calcutta, 1908), page 12.

[3] Papers relating to Technical Education in India, 1886-1904, pages 188-228.

'admittedly not been successful;'[1] and that the facilities were insufficient for the training of mechanical engineers;[2] but his report deals rather with the training of foremen and mechanics than of engineers intended to take responsible charge. Mr. Collin appears to have been the first officially to suggest the establishment of coal mining classes. A conference of coal mine managers held at Raniguni (in 1899) proposed the establishment of a school at Asansol or some place near the mines; but Dr. Walter Saise, Manager of the East Indian Railway Collieries, Giridih, expressed the view that a special school was unnecessary and that the training at Roorkee or Sibpur was quite suited for the first two years of the course, while students might spend three months at 'Asansol or some central spot during the last or third year.'[4]

12. The Government of Bengal, in a Resolution of 9th October 1891 on Mr. Collin's report,[5] expressed the view that Sibpur College should become the 'centre of industrial education in Bengal' and that it might be expected to prove of the greatest service to local technical schools by supplying them with trained teachers, and by receiving their most promising pupils for advanced instruction.

13. In 1894-95 the 'Survey School' at Dacca,[6] established in 1876, and those of Cuttack and Patna (now no longer in the province), were affiliated to Sibpur College, presumably as part of the general scheme to make the college the technical centre of Bengal. But the only survival of this connexion appears to be the existence of the Joint Examination Board for overseer and sub-overseer classes described in paragraph 40 (*g*) below.

14. In 1896, classes in electrical engineering were first established in the college, due originally to an electric installation for electric light, but it was not until 1912 that a regular course in electrical engineering, as it at present exists, was organised under a professor of electrical engineering.

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[1] *Loc. cit.*, page 198, para. 59.

[2] *Loc. cit.*, pages 198 and 200, paras. 59 and 64.

[3] *Loc. cit.*, pages 220-1.

[4] *Loc. cit.*, pages 221-3.

[5] *Loc. cit.*, pages 228-9.

[6] The school was converted into an engineering school training students up to the overseer standard by a decision of 1902. (Quinquennial Review of the Progress of Education in India, 1902-07, para. 530, page 174.)

15. In 1901 the Educational Conference at Simla adopted the following resolutions, relating to Sibpur as well as other colleges;

"That technical education in India has hitherto been mainly directed to the higher forms of instruction required to train men:—

(*a*) For the Government service as engineers, mechanicians, electricians, overseers, surveyors, land revenue officers and teachers in schools;

(*b*) For employment in railway workshops, cotton mills, mines, etc.

That the institutions which have been established for these purposes, such as the engineering colleges at Rurki, Sibpur and Madras, the College of Science at Poona, the Technical Institute at Bombay, the Engineering School at Jubbulpore, etc., the majority of which are affiliated to universities and train up to university courses, have done, and are doing valuable work, and that their maintenance and further development are matters of first importance; but that the first call upon technical effort should preferably lie in other directions."[1]

16. In 1904 the Government of India requested the Bengal Government to prepare a scheme for instruction in mining engineering; and in 1906 the mining classes at Sibpur were started, and the present professor of mining was appointed to take charge of the Department.[2] A mining sub-committee of the Board of Visitors was set up in connexion with the Sibpur classes; but the regulations affecting it have been modified, the latest modification having been made in September 1916. It is now amalgamated with the Mining Educational Board originally constituted to supervise teachers in the coal-fields.[3]

17. In 1908 sanction was given to the establishment of dyeing classes at Sibpur. The classes were opened in 1911, but the attendance was so poor that they were closed in August 1916.[4]

18. It was about 1903 that it was first proposed to remove the Civil Engineering College from Sibpur to another site, a proposal which is still before the Government of Bengal and has given rise to a series of schemes for technological and engineering education awaiting settlement. In February 1905 the Government of Bengal asked the Government of India to sanction the sale of the Sibpur site to the Port Commissioners of Calcutta. The Govern-

[1] Papers relating to Technical Education in India, 1886-1904, page 251.

[2] Quinquennial Review of the Progress of Education in India, 1902-1907, pages 195-197.

[3] Calendar of Sibpur Engineering College, 1917, page 20, and paras. 47-49 below.

[4] A dyeing course has been established in connexion with the weaving classes at Serampore (see Chapter XXVI, paras. 4-7) under an order of July 1917.

ment of India were informed that the Board of Visitors at that time were unanimously in favour of removal. We have not had before us the official correspondence on the subject; but from a departmental report submitted to us it appears that the chief grounds for the removal of the college from Sibpur were those of health. The site was said to be unhealthy and the climate too enervating for satisfactory work either by the staff or the students. The other reasons put forward for the removal as enumerated in the report presented to us were (1) the proximity to Calcutta, which was regarded as detrimental to the morals and discipline of the students; (2) the unsuitability of the buildings and the cost of reconstruction; (3) the necessity for making further provision for the recently opened Mining Department, and for the then proposed Department of Chemical Technology.[1]

19. In February 1907 a definite scheme was submitted to the Government of India for the sale of the property to the Port Commissioners and for the removal of the college to Ranchi, in Bihar. The cost of reconstructing the college at Ranchi was estimated at Rs. 17 lakhs. In 1910 the Government of India sanctioned the sale of the site as proposed; but it was then found that it would cost not Rs. 17 lakhs but Rs. 24 lakhs to reconstruct the college at Ranchi; and this part of the scheme was not sanctioned.

20. It was generally recognised that if the Engineering College were removed from Calcutta a good deal of the work carried on in the college would still have to be continued in the neighbourhood of Calcutta. Mr. Cumming, in his report of 1908, had advocated the development of Sibpur College "as an engineering college proper, to teach civil, mechanical, electrical, mining and sanitary engineering" in its existing form, with certain improvements, though not on its existing site. He reported that he understood that the college was to be removed to Ranchi; and he advocated the institution in Calcutta of a technological institute of which the nucleus would be the industrial and chemistry classes which it was then proposed to start in Sibpur, and that this institute should be affiliated in some way with the physics and chemistry classes of the Presidency College and with the textile instruction at Serampore.[2]

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[1] Para. 16 above.

[2] Technical and Industrial Education in Bengal, 1888-1908, by J. G. Cumming (Calcutta, 1908), page 31.

The Report on Public Instruction in Bengal for 1909-10 contains the following passage :—

"One of the wants.....which will presently have to be satisfied when the Sibpur College is removed to Ranchi, if not sooner, is that of a Government technical institute for Calcutta which will provide for the teaching of mechanical and electrical engineering and of industrial chemistry. Subjects such as these can only efficiently be taught in the localities where the corresponding industries are carried on, and Calcutta has already established itself as a recognised centre for the two former, and will most likely become the chief centre of the province for the last-named industry as well."

21. The Government of India in 1911 asked for the views of the Government of Bengal on this matter with the object of retrenching the scope and estimates of the college at Ranchi; and in January 1912, the Government of Bengal appointed a Committee, presided over by Mr. F. A. Slacke, to inquire into and advise the Government in regard to the distribution of the subjects then taught at Sibpur.[1] The Committee were to consider *inter alia* the question of the creation of a Technological Institute in Calcutta. The Committee reported in May 1912 in favour of the removal of the college from Sibpur, by 'a large majority.' They appear to have been influenced in their decision by the claims of the Port Commissioners to the site, but their report states that the majority of the Sub-Committee on the question of the site were further of opinion that 'on its merits' the site was unsuitable for an engineering college.[2]

22. The Committee strongly recommended the creation of (*a*) a technical institute in Calcutta and (*b*) a residential, well-equipped civil engineering college. The Committee held that if the creation of the two separate institutions were impossible, 'provision of a non-residential nature' might be made for the teaching of higher civil engineering in the institute; but a 'moiety of the Committee' at the same time considered a residential college essential for the proper training of civil engineers. The Committee recommended that in any case the Technical Institute should teach mechanical and electrical engineering in both the higher and the lower grades. They also recommended that in

[1] The Committee originally consisted of 15 members to whom 3 others were added by the President. See the Proceedings and Report of the Committee.....on the Creation of a Technical Institute for Calcutta and Allied Subjects (Calcutta, Bengal Secretariat Book Depôt, 1912).

[2] *Loc. cit.*, pages 5 and 19-20.

addition to engineering it should give teaching in textile subjects, and commercial subjects, and that there should be a small department of technical chemistry to provide the instruction in that subject required for engineering and for dyeing as part of the textiles curricula.

23. The Committee reported that in their view the mining department of the Sibpur College should be discontinued and a mining school founded at some such centre as Asansol, the cost of the teaching to be borne jointly by the Presidency of Bengal and the province of Bihar and Orissa.[1]

24. In 1912 the Government of India asked Lieutenant-Colonel E. H. de V. Atkinson, then Principal of Roorkee College, and Mr. T. S. Dawson, Principal of the Victoria Jubilee Technical Institute, Bombay, to carry out an 'Enquiry to bring Technical Institutions into closer touch and more practical relations with the Employers of Labour in India.'[2] Their report contains conclusions which have a direct bearing on the problems of the future of the Civil Engineering College and the proposed Technical Institute, and from which we quote the following[3]:—

"(3) There is practically no opening at present for the employment of high grade mechanical or electrical engineers whose education is mostly of a theoretical character.

(4) There is a very large opening for the employment of men in mechanical and electrical engineering, who after training in a properly equipped institute, are willing to gain their practical experience by apprenticeship on a living wage, work with their hands, and observe factory hours and rules. This employment is open to Indians of every caste and creed, grade of social position or education, provided these conditions are observed; and the height to which they can rise depends on their individual characteristics.

(5) The best method of training men in mechanical and electrical engineering to meet the existing demand is by a course at a well equipped institute, followed by an apprenticeship in works. Institutes should not grant any certificates till this apprenticeship is satisfactorily completed.

(6) The education given in the institute should be essentially practical; be capable of being applied commercially, and not of such a high scientific character as is often considered necessary in the West.

(7) Large mechanical and electrical institutes are, at present, only necessary in those provinces in which industrial development is well advanced. Minor

[1] Dr. (now Sir Deva Prasad) Sarbadhikari appended a note saying that in his opinion the earlier stages of the mining class might well be taught in connexion with the Central Technical Institute; and he suggested Barakar in lieu of Asansol for the final stage.

[2] The Report was published by the Superintendent of Government Printing, India, Calcutta, in 1912.

[3] *Loc. cit.*, page 15.

institutes should be properly endowed, equipped with adequate staff and apparatus, and placed under proper control as regards their courses and certificates."

25. In 1913, a further body of three persons, Messrs. R. Nathan and G. W. Küchler, who had both been members of the Technical Institute Committee, and Mr. W. A. Everett, who had acted as its secretary, were appointed to work out a detailed scheme for the Institute. They recommended that it should at the outset comprise the following departments[1]:—

Departments.	Number of students.	
	Day classes.	Evening classes.
Engineering—mechanical, electrical and civil	300	300
Textile fabrics, jute and cotton	70	...
Chemistry for engineering, textile, and special students . .	15	...
Printing	110	...
Commerce	140	60
For women—dress making and millinery and commerce . .	40	...
	675	360

(We give details in regard to departments other than those of engineering merely to indicate the general character of the institute proposed.) It is important to point out that while under the scheme there were to be higher day classes in electrical and mechanical engineering, there were to be no higher classes in civil engineering. This was because of the new proposal, explained in Chapter XXXIII, to transfer the higher civil engineering department not to Ranchi, according to the original scheme, but to the projected University of Dacca.

26. The question of the advisability of training high grade electrical and mechanical engineers in Calcutta was one on which varying opinions had been expressed. The Technological Institute Committee were in favour of such training. Lieutenant-Colonel Atkinson and Mr. Dawson had opposed it.[2] But Messrs. Nathan,

[1] See Report on a Technological Institute for Calcutta Bengal Secretariat Book Depôt, Calcutta, 1913), page 2.

[2] Para. 24 above, conclusion 3.

Küchler and Everett came to the conclusion from the evidence of the employers on whom Lieutenant-Colonel Atkinson and Mr. Dawson had relied in this matter that the employers in question "regarded the high grade man as one necessarily lacking in practical training and experience, and that their objections were based on these assumed defects rather than on the grade of instruction."[1] They therefore adhered to the proposal of the Technical Institute Committee to provide high grade instruction in mechanical engineering.

They proposed that ten students should be admitted annually in each of the higher grade classes; that the minimum qualification should be the I. Sc. of the Calcutta or of the Dacca University or its equivalent; that the age for admission should be 18 or 19; that a 'departmental board' should choose candidates for admission with great care, and have authority to impose any special test they thought necessary and assure themselves especially that the candidates had mastered the practical as well as the theoretical part of the I. Sc. course; and finally that the three years' course at the Institute should be followed by a three years' apprenticeship.

27. The Calcutta University Regulations provide for degrees in mechanical and electrical engineering, but as there has been no suitable training for the degrees the regulations have remained a dead letter. Messrs. Nathan, Küchler and Everett proposed that the higher courses in the subjects in question should lead up to degrees in Calcutta University, but these degrees were only to be conferred on those students who, after having satisfied the University by passing an examination at the end of the third year of university studies, further satisfied a university board at the end of the second period of three years devoted to apprenticeship. Thus the course for an engineering degree was to consist of six years' training, after passing the intermediate examination, and to comprise three years' work at the Technical Institute and three years spent in apprenticeship. The University Board was to take into consideration reports on the work of the students during their apprenticeship, to make enquiries from their employers and to question the students themselves before advising the Syndicate on whom degrees were to be conferred. In view of the fact that the students were to be trained for 'a commercial purpose' the regulations of the

[1] See Report on a Technological Institute for Calcutta, page 14.

University were to be elastic and not to prescribe any curriculum in detail so that it might be readily adjustable to meet varying and special conditions. Finally, the Engineering Faculty of the University was to work in close communication with the Board of the Engineering Department of the Institute.

28. The Technological Institute Committee had suggested that the Institute should be established in some such place as Writers' Buildings. Messrs. Nathan, Küchler and Everett thought these would not be large enough and that the Imperial Secretariat and the Government of India Press (which it was assumed would be freed by the change of capital) would make an admirable technical institute; and they submitted plans and estimates for the cost of its establishment in those buildings. But up to the present the buildings have not been vacated by the Government of India and there appears to be no probability of their being vacated.

29. Apart from plans for local reconstruction another threat to the development of the Sibpur Engineering College lay in the proposal to centralise higher engineering instruction for the whole of India in a single institution.

30. On February 28th, 1914, Mr. Surendra Nath Roy moved a resolution in the Bengal Legislative Council to the effect that the proposal to abolish the Civil Engineering College at Sibpur be dropped, and that the College be either retained at Sibpur, or if the present site be considered unsuitable that it—

(*i*) be removed to a suitable site in Calcutta or its immediate vicinity, and

(*ii*) be made a branch of the proposed technological institute in Calcutta.

The position taken up by the supporters of the resolution was that they had no objection to a civil engineering college as part of the proposed University of Dacca, but that they objected to the proposal to deprive Calcutta of facilities for higher instruction in civil engineering. The resolution was withdrawn on the understanding that the question of the training to be afforded to civil engineers would not be completely dealt with and settled, so far as the Government of Bengal was concerned, before the Public Services Commission had considered the subject.[1]

[1] Quinquennial Report on the Progress of Education in Bengal, 1912-13 to 1916-17, by W. W. Hornell, page 76.

31. The Public Services Commission reported clearly against the plan of substituting a central college for the four existing colleges in the following terms :—

"It is laid down that each of the four Indian engineering colleges shall have the patronage of a certain proportion of the total number of appointments available for direct recruits [*i.e.*, to Government Service]. Under present arrangements six and seven students are taken in alternate years from the Thomason Engineering College, Rurki, and one each year from the Sibpur, Madras and Bombay engineering colleges respectively. One of the first questions brought to our notice concerned the rival merits of this arrangement and of an alternative scheme for the establishment of a central engineering college for the whole of India. The advocates of a central college affirmed the advantages to be gained by concentrating the whole of the higher engineering teaching in a single institution; but the objections to any such scheme seem to us far stronger than any arguments in its favour. It has to be remembered, first, that the four engineering colleges constitute the sources of supply from which engineers are obtained not only for employment under the Government of India and the local Governments, but for the service of native states, of local and district boards and municipalities, and of outside engineering firms. The number of highly trained engineers required for all these purposes, already considerable, is continually increasing, and we doubt whether a single college would be able to cope with so large a number of advanced students as would, even under present conditions, be annually under instruction. Apart from this consideration, we believe that a central college, wherever established, would tend to obtain students mainly from the neighbouring provinces, and that the advancement of engineering science in the more distant provinces would be bound to suffer. We, therefore, deprecate the adoption of this scheme. The balance of advantage lies on the side of encouraging the development of the local colleges so that each may be capable of teaching up to the highest standard.[1]"

32. The proposal for concentrating the higher training at an Imperial college was advocated by Mr. B. Heaton, Principal of the Sibpur College,[2] in evidence before the Public Works Department Reorganisation Committee, but that Committee stated their agreement with the Public Services Commission on this point

[1] Report (1917) Volume I, Annexure XVIII, para. 14.

[2] Evidence of Public Works Department Reorganisation Committee, Vol. II, page 229. Although Mr. Heaton said in one portion of his evidence that he was "in favour of concentrating the teaching at an Imperial college" (Question 1879) he discussed in the answer to the next question the possibility, as an alternative, of a federated system under which each of the existing engineering colleges or at any rate several of them, should specialise in one or more branches of higher instruction; and he proposed that mining should be taken at Sibpur or elsewhere in Bengal. In evidence before the same Committee, Volume III, page 179, Mr. W. G. Wood, Principal of the Roorkee College, expressed the view that that college should be made an Imperial college and provide engineers for the Imperial service. He expressed no view as to the future of the Sibpur College.

and added that they were "convinced that the centralisation of higher engineering education would be a retrograde step and would affect adversely the industrial development of India, with which development the demand for engineers is certain largely to increase."[1]

33. We emphatically support the views of the Public Services Commission and of the Public Works Department Reorganisation Committee in this matter.

34. We have in the foregoing paragraphs had chiefly in mind the question of the training of civil, technical and electrical engineers of university grade, the question which concerns us more immediately. But in all the complex discussions on the question of site the training of foremen in conjunction with engineers of higher grade plays, and in view of existing circumstances, justly plays, an important part; and immediately connected with this question are the proposals for the establishment with a department of one or more directors of industries for the Presidency, who would be specially concerned, among other matters, with the training of the lower grade engineers.

35. Mr. J. G. Cumming, in 1908, proposed the appointment of an expert Superintendent of Industries or Director of Industrial Enquiries;[2] and the appointment of an officer with the title of 'Superintendent of Industries and Inspector of Technical and Industrial Institutions in Bengal' was sanctioned in 1909 and was filled in 1910. But the Conference on Industrial Education held in February-March, 1909, at Dacca (then in the Province of Eastern Bengal and Assam) went further. It proposed to create a Department of Industry and to entrust to it among other things 'the control of technical and industrial education.' We may add that among the other specific recommendations of the Conference was one to establish a 'Central Industrial Institute' at Dacca, giving, not advanced courses, but lower courses of a practical character, and to incorporate with it the existing school of engineering at Dacca.

36. The Bengal District Administration Committee considered the questions both of industrial development and of industrial

[1] Report of Public Works Department Reorganisation Committee, Volume I, para. 72, page 66.

[2] Review of the Industrial Position and Prospects in Bengal in 1908 (Part II of Special Report) by J. G. Cumming, page 45 (Calcutta, Bengal Secretariat Book Depôt, 1908).

education and urged the creation of a department and directorship of industries. They stated definitely that the entire industrial work of both the Dacca and the Calcutta schemes should, in their opinion, be handed over to the Director of Industries.[1] But they did not pronounce any final judgment as to the division of control in regard to 'technical,' as distinguished from 'industrial,' training between the Director of Industries and the Director of Public Instruction.

37. The principal and a certain number of the staff of the Sibpur College have urged that not only industrial but technical education should be separated from the universities and handed over to a Department of Industries.[2] We shall discuss this important question elsewhere (Chapters XLVI and XLVIII). It is one which presents special difficulties in India owing to the system of training men of different grades in the same institute.

38. The question has been rendered if anything more acute, by a recent (undated) report of a sub-committee of the Governing Body of the Sibpur College, who, endorsing the views of Messrs. Atkinson and Dawson, and rejecting those of Messrs. Nathan, Küchler and Everett,[3] stated that there was "no demand which would justify the local training of mechanical engineers of the university type;" and that what was needed was "men conversant with workshop practice, and men who have had sufficient technical training to enable them to build, construct, equip, and take charge of workshops."[4] They further stated that if training of a university standard was required it should be sought in England rather than in India. The Sub-Committee recommended 'two parallel courses' for training mechanical engineers of the type which they regarded as most useful:—

(*a*) The first course was to consist of a college course of three years followed by three years at works[5]; and was to be open only to a limited number

[1] Report of Bengal District Administration Committee (1915), page 187.

[2] General Memoranda, page 35. From the dissenting notes of Mr. R. N. Sen and the evidence of Mr. B. C. Gupta it appears that the existing senior staff are not unanimous in regard to this point.

[3] Paras. 24 and 26 above.

[4] We understand from the evidence of the Sibpur College staff (General Memoranda, page 36) that the report has been forwarded to the Government of Bengal; it is not stated whether the Governing Body of the college have endorsed its proposals.

[5] This course appears to be practically identical with the course recommended by Messrs. Nathan, Küchler, and Everett for a university degree (see para. 27 above).

with the aim of securing the cleverer type of lad, either a boy who had completed a course at a secondary European school with suitable subjects, or an Indian who had completed the intermediate science course with mathematics and physics.

(*b*) The other course was to consist of four years spent at works, with obligatory attendance at local technical schools. In neither case was the full technical diploma to be granted until the six years had been satisfactorily completed.

The Sub-Committee thought that the main stream of lads from school who desire to become mechanical engineers should be directed to the workshops in the first instance, to course (*b*); and that the direct admissions to the college mechanical and electrical courses should not exceed ten a year. They also suggested that during a transitional period of say two or three years, the principal should have discretionary powers to admit youths of lower qualifications; and that when the steady rate was reached ten boys would be admitted annually to course (*a*) and ten to course (*b*).

An essential feature of the scheme was the co-operation of the railway companies; and the Sub-Committee proposed —

(*i*) that the railway companies should build and furnish the hostels and technical institutes at the centres for their railway shops;

(*ii*) that the railway companies should staff the hostels;

(*iii*) that Government should provide for the cost of the teaching staff and apparatus at the technical institutes through a grant-in-aid to the railway companies;

(*iv*) that provision should be made for scholarships tenable at Sibpur by passed apprentices.

The Sub-Committee further suggested the constitution of 'a Board of Control' to supervise the scheme and advise the Government both with regard to the further training of mechanical and electrical engineers at the college and with regard to the improvement and development of the mechanical institutes in connexion with the workshops in the Presidency.

39. It will be obvious from the history sketched out in the foregoing paragraphs that the situation as regards the development of higher engineering teaching in Bengal—and it is that portion of the teaching which mainly concerns us — is in a singularly tangled condition. We think that, without anticipating our detailed proposals, which will be set forth in a later chapter[1] we shall simplify

[1] Chapter XLVI.

matters to some extent if we say here that we are convinced, in view of a report of April 2nd, 1918, by Dr. C. A. Bentley, Sanitary Commissioner for Bengal, on the present sanitary condition of the locality, that there is now no reason for removing the College from Sibpur, and that the college should be developed on the existing site. In order to be able to discuss more closely the problem of its future we shall now give further details in regard to the College, as it exists to-day.

II.—Description of the Sibpur Civil Engineering College.

40. *Site.* The college is situated on the right bank of the River Hooghly (that is on the opposite side of the river to Calcutta): it is 3½ miles from Howrah Station and about 5½ from the University central buildings. It covers an area of 110 acres (including a number of tanks, of which the total area is about 20 acres); and it has a frontage of 3,000 feet on the river, immediately north of the frontage of the Royal Botanic Gardens, from which there is regular ferry service to Calcutta.

We shall refer in Chapter XLVI to certain suggestions made by Dr. Bentley in regard to desirable sanitary improvements.[1]

(*a*) *Building and Equipment.*—The buildings include laboratories for chemistry, physics, applied mathematics and mechanics, mechanical engineering, hydraulics, electrical engineering and metallurgy; a model room, a mining museum, drawing offices, and an extensive series of workshops, for engineering and carpentering work, together with a smithy, foundry and a sawmill. Power is supplied by two 45 H.P. engines; and there is also a steam engine for experimental purposes. There is a one hundred ton testing machine but we were informed that a machine testing up to 150 tons was now needed for the work brought to the laboratory. A hydraulic laboratory is in contemplation but is not yet equipped. The electrical plant needs to be increased. We were told that the class room accommodation, though good of its kind, is insufficient for the number of students.

The library has about 10,000 volumes.

The total floor space of the rooms and laboratories used for college work (as stated in the report of the university inspectors for 1916-17 and 1917-18) is over 40,000 square feet.

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[1] See para. 39 above.

(*b*) *Staff.*[1]—The staff consists of the principal (I.E.S.), who has no teaching duties, and of the following :—

Civil Engineering.—One professor (I.E.S.) ; two instructors (P.E.S.) ; one teacher (S.E.S.) ; and one lecturer (P.E.S.) ; together with a sub-department of drawing including one assistant professor and one teacher (both P.E.S.)

Mechanical Engineering.—One professor and superintendent of the workshops (I.E.S.) ; one assistant to the professor ; four foremen instructors (all in the S.E.S.) ; and 14 Indian mistry instructors.

Electrical Engineering.—One professor (I.E.S.) ; and one demonstrator.

Department of Mining.—One professor (I.E.S.).

Department of Physics and Mathematics.—One professor (I.E.S.); one demonstrator for physics (S.E.S.) ; one lecturer and one demonstrator in mathematics ; and one instructor.

Department of Chemistry.—One professor (I.E.S.) ; and one demonstrator.

There is also a staff of eight laboratory assistants and draughtsmen, allotted to the sub-department of drawing (1), and the departments of civil engineering (1), mechanical engineering (1), mining (2), the chemical laboratory (1), physical laboratory (1), and electrical laboratory (1). Of these four belong to the S.E.S. An arrangement has recently been sanctioned for instruction in architecture to be given to the third and fourth year students of the Engineering Department by the Assistant Consulting Architect to the Government of Bengal. There is a medical staff under the headship of an assistant surgeon. There are three superintendents of hostels, of whom two are members of the junior teaching staff. There is a librarian and an office and general staff. Several members of the staff are at present on deputation and are replaced by officiating deputies who are not included in the above list. Under existing arrangements the staff normally includes seven members of the I.E.S. ; five members of the P.E.S. ; and ten of the S.E.S.

(*c*) *Civil Engineering.*—At the present moment there is only one class for university students at Sibpur, the 'Engineering

[1] The following abbreviations are used—I.E.S. for Indian Educational Service ; P.E.S. for Provincial Educational Service ; S.E.S. for Subordinate Educational Service. The details are mainly taken from the Calendar for 1917. See also para. 40 (*o*) below.

Class,' which is limited to civil engineering. Since the reconstitution of the University in 1906 the standard for admission has been formally raised from the matriculation standard[1] and candidates are required to have passed the intermediate examination in science or arts of the Calcutta University in English, mathematics and physics or chemistry. They are also required to pass such special test in drawing as may be prescribed by the principal. Candidates must be under 21 on the 1st of January in the year of admission.[2] The total number of students at present admissible to the first year class in any one year is 24[3] of whom not more than four may be 'special students.'[4] 'Special students' are defined in the calendar as including "the sons of professional men, owners of landed or mineral property, and others who wish to receive training in connexion with private business and the development of the country and its resources." There is no defined age limit for special students but the calendar states that "they should have, as nearly as possible, the same educational qualifications as regular students."

The figures for the last four years, supplied by the principal, are as follows:—

Year.	Number of applications from qualified candidates.	Number selected for admission.	Number of students who actually joined the college.	Number of students[4] re-admitted after failure at examination.	Total of admissions and re-admissions.
1915-16 . . .	77	29	26	12	38
1916-17 . . .	85	28	25	13	38
1917-18 . . .	84	34	24	2	26
1918-19 . . .	98	28	26	2	28

The university course extends over four years divided into (1) an intermediate course and (2) a final course, each of two years. The intermediate course is divided into two sections: (A) mathematics and science (including

[1] Paras. 5 and 10 above.

[2] Until the issue of new regulations in 1919, the maximum age of admission for bachelors of arts and science was 23 years.

[3] This number varies from time to time; it has been reduced somewhat lately, in order to find room for the larger number applying for the mechanical and electrical and the mining classes.

[4] See also para. 40(c) below.

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general chemistry and physics), and (B) mathematics and applied science (including technical chemistry with metallurgy and applied physics), descriptive engineering ; surveying ; drawing ; and estimating. Section A may be taken at the end of the first year of the intermediate course and in the event of a candidate failing in one group, mathematics, or physics, or chemistry, he may be allowed to present himself for re-examination in that group appearing at the intermediate examination in engineering. Such a candidate may obtain credit for the remaining group of section A, but is not allowed to pass in Section B unless he has previously qualified in all groups of Section A.

The candidates are required to submit attested surveys, for which marks are assigned and the examination includes practical tests in chemistry (pure and technical, including metallurgy), physics (general and applied), surveying, drawing and estimating.

The final course for the bachelor of engineering degree is also divided into two sections, a non-professional section including mathematics, geology, mineralogy and applied physics ; and a professional section including applied mechanics, hydraulics, irrigation and sanitary engineering, roads and railways, the principles of architectural design, mechanical engineering (treated in 'a simple manner') and electrical engineering (treated in 'a simple manner'). The 'non-professional section' may be taken at the end of the first year of the final course ; and this section is treated in relation to the 'professional section' as Section A is treated in relation to Section B at the intermediate (see above.)

The candidates are required to submit attested designs for engineering works and buildings, for which marks are allotted ; and there are practical examinations in applied physics, mechanical engineering, electrical engineering and drawing. The regulations were revised in 1917, when the principle of 'compartments,' by the division of the intermediate and final examinations into sections, was introduced.

The regulations do not specify that the candidates must satisfy the examiners separately in the practical examinations ; and in their present form it is impossible in certain cases to ascertain whether the regulations require or do not require a candidate to pass separately in some of the subjects enumerated.

The students go into camp every year for practical training in surveying in each of the first three years of the course.

Mr. Heaton, in his evidence before the Public Works Department Reorganisation Committee (question 1883) stated that the average number of bachelors of engineering produced yearly was 11·5, and that he regarded this as an over-production. It appears from his statement that owing to the small number of Public Works Department appointments of the engineer grade open to them, the graduates, if possible, enter the department as upper subordinates and that those who fail to do so join firms of contractors or district boards. The College has a list of between 80 and 90 bachelors of engineering at present serving under district boards, municipalities or firms of contractors.

(*d*) It is to be noted that the civil engineering course includes a certain amount of workshop training (eight hours weekly in the carpenters', engineering, and blacksmiths' shops) on which no university examination is held. The college regulations further provide that "after obtaining the university degree in engineering every regular student shall, as far as possible, be given the opportunity of undergoing a course of practical training for one year, and on completing this training to the satisfaction of the officer, firm or person under whom he has received it, and of the principal, the student is granted a college diploma." The practical training scholarships of Rs. 50 a month are offered annually on the result of the B.E. examination; and practical training is arranged (*a*) under the Public Works Department, Bengal or Burma, (*b*) under the Sanitary Engineer, Bengal, (*c*) upon a selected railway. If a student does not receive a satisfactory certificate in regard to practical training at the end of the first year, he is at liberty to submit reports at the end of any of four succeeding years on his practical training with a view to obtaining the diploma.

The Indian Government guarantees one appointment a year in the Superior Provincial Service of the Public Works Department to students of the college who are statutory natives of India; and the marks gained in the practical work in the shops count in the award of this appointment.

(*e*) Regular students who fail twice either at annual college examinations, at the intermediate, or at the bachelor's examination, are removed from the books, but they may be re-admitted as special students by the principal. As special students are ineligible for the guaranteed posts, or for scholarships or prizes, even if readmitted a scholar loses his scholarship under these conditions.

(*f*) Although the object of the two courses is different the course for non-university students in civil engineering is to some extent identical with the diploma course for the university students, and extends altogether over five years, of which four are spent at the college. The students are admitted on a lower qualification and with a lower age limit, depending on the qualifying examination which the candidate has passed. The Calcutta matriculation is one of the qualifying examinations. Of the five years, three and a half are given to a combined practical and theoretical course and the last one and a half to practical

instruction only.[1] The course until recently was divided further into two ; the lower subordinate (or sub-overseer) course, and the upper subordinate (or overseer) course. In 1917 no student entered for the sub-overseer course and the class has been abolished. The staff of the Sibpur College stated in evidence that they desired to separate the upper subordinate from the lower subordinate course ; to make it a four instead of a five year course, the last year being solely devoted to practical training ; and to call the course an 'Upper Subordinate Diploma Course.'[2] Government have quite recently sanctioned a three year overseer course at the College, to be followed by a year's practical training.

(*g*) The examinations for the civil overseer and sub-overseer classes (as well as for the mechanical and electrical classes) are conducted under the control of a 'Joint Technical Examination Board' instituted 'in order to control and consolidate', such examinations in the provinces of Bengal, Bihar and Orissa, and Assam. The Board, which only examines such institutions as it has 'recognised,' consists of six persons and a secretary, and includes the Principal of the Sibpur College, the Head Master of the Dacca School of Engineering, and the Principal of the Bihar School of Engineering, Bankipore. The Board appoints the examiners, receives their reports, and issues certificates in connexion with these examinations and also issues the certificates awarded at the end of the 18 months' practical work which follows the overseers' examination at Sibpur.

The Principal of the Sibpur College in a memorandum submitted to us[3] severely criticises the composition of the Board, especially on the ground that it contains no practising mechanical or electrical engineers, although it has to conduct the examinations for the classes in mechanical and electrical engineering[4] as well as those of the overseer classes in civil engineering. He expresses the opinion that the Board has 'survived its usefulness' and that its functions should be transferred to an 'enlarged Board of Visitors.'

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[1] The prescribed period is 1½ years ; the actual period exclusive of vacations is one year.

[2] Mr. Slacke's 'Committee on the creation of a Technical Institute' for Calcutta (see para. 21 above) proposed that the overseer course should be a three years' course (see their report, page 5).

[3] General Memoranda; page 33.

[4] Para. 40 (*h*) below.

(*h*) *Mechanical and Electrical Engineering.*—There is a single three years' course of mechanical and electrical engineering, followed by one year's practical training.[1] Mr. Heaton, the Principal of the College, stated in his annual address for 1916[2] that the education given in the mechanical and electrical classes was of a higher standard than that ordinarily given in 'overseer' classes and that every student who qualifies readily finds employment. Mr. B. C. Gupta,[3] the Officiating Professor of Electrical Engineering, suggested in evidence that the teaching should be developed so as to provide an upper grade course, leading to a degree and extending over four or even five years, and a lower grade or three years' course as at present. He thought that during the first three years the teaching for the two courses should be largely in common, but suggested that a modified syllabus in mathematics and science might be provided for the higher grade men. Mr. Gupta admitted that there were advantages in separating the upper from the lower grade work but deprecated any drastic change until engineering had become far more popular than at present. He thought it was out of the question now to provide separate colleges for the two classes of students.

Mr. Gupta informed us that nine certain offers of appointments of foreman type had been made by the Tata Brothers, Bombay Hydro-Electric Scheme and the Cape Copper Co., but that he had not enough men to fill the posts. So far, he said, all the Sibpur engineers from the electrical and mechanical department had found very remunerative employment or had set up successfully in business; and even 'failed students' had found excellent billets. The demand was at present in excess of the output.

Mr. Gupta informed us that in 1917 there were 160 candidates for the mechanical and electrical course, and only 70 vacancies. He found however that they were not well equipped and suggested the standard of the intermediate examination in science as the proper standard for admission. He regards a good knowledge of English as essential, and thinks that the school course preparatory to admission to the mechanical and electrical course should include practical chemistry; physics, including the elements of

[1] The examinations of the mechanical and electrical students are carried out by the Joint Technical Examination Board, see para. 40 (*g*) above.

[2] Printed in the calendar of Sibpur Engineering College for 1917.

[3] General Memoranda, page 105.

magnetism, and electricity; and a knowledge of mathematics including trigonometry, algebra and mensuration.

(*i*) *Mining Classes.* (See paragraph 52, below.)

(*j*) *Artisan Classes.*—The college also trains artisans, who are in no sense of the word 'students' of the college, considered as an institution for higher instruction. Their presence enables the workshops to turn out a much larger quantity of finished work than would otherwise be possible. They are workmen apprentices, and we regard it as a matter for the future Department of Industries, which we hope will take charge of this grade of education in accordance with the recommendations of the Industrial Commission, and of the Governing Body of the college, to decide whether the combined system of employment and training of these youths serves the general purposes of the college or otherwise. The presence of a certain number of trained workmen in the shops would of course be indispensable in any case, especially for dealing with the heavier jobs.

(*k*) *Number of students.*—The number of students in the various departments for the years 1915-16, 1916-17 and 1917-18 were as follows:—

Year.	Engineer Department.	Apprentice Department.	Artisan Department.
1915-16	78	213	40
1916-17	84	212	48
1917-18	86	218	63

(*l*) *Residence.*—All the students reside in the college precincts. The residential accommodation at Sibpur is of a very simple kind; some of the rooms in the hostels are for eight students, others for four.[1] There are no single rooms as at Roorkee. There are three separate students' messes for Hindus, Musalmans, and Europeans and Anglo-Indians. But we understand from the Principal that each mess, with very little variety of food, is run for the benefit of the very poorest; in the messes the engineer students mix with all the other students of the college. Mr. Heaton reported that as a consequence of this some Bengali parents hesitate to send their sons to the college. We shall state elsewhere[2]

[1] The only rooms for four students are in the quadrangle reserved for the Apprentice Department.

[2] Chapter XXXIII.

that we think that hostels should be provided which correspond reasonably to the home conditions under which the students live, subject to the proviso that well-to-do students should be required to pay for the additional cost involved in supplying quarters for them above the minimum standard; and we have pointed out the desirability in the interests of the work of students of supplying single rooms wherever this is possible.

We understand that a small number of the 'special students' are allowed to board with resident members of the staff.

We should add that quarters are provided for the majority of the staff as well as for the students.

(*m*) *Constitution of Sibpur College. The 'Governing Body.'*— The college is a Government college. The detailed management is entrusted to a 'Governing Body', which, in view of the limitations of its powers might be more appropriately called a committee of management. The Governing Body was first set up in 1909. The general functions of the governing bodies of Government colleges are stated as follows[1]:—

(1) To frame the college budget, to control expenditure under the budget and to examine and pass the college accounts.

(2) To consider, examine and initiate projects for the improvement of the college.

(3) To advise the Director of Public Instruction as to the courses which the college should teach.

(4) To advise the Director of Public Instruction with regard to changes in or additions to the staff.

(5) To deal with all branches of discipline brought before them by the principals, subject to the regulations of the Calcutta University and to the orders of Government. It shall be incumbent on the principal of each college to bring before the Governing Body all such breaches of discipline as in his opinion call for the punishment of rustication, or expulsion, or for a general punishment involving a large number of students.

(6) To deal with any questions referred to them by the Director of Public Instruction.

(7) To exercise such additional functions as may from time to time be assigned to them by Government.

The powers of appointment and control of the staff are larger in the case of the Presidency and Sibpur Colleges than those of the governing bodies of other colleges. But they are limited to appointments other than those in the Indian Educational Service, from which service all the major appointments are filled. Further

[1] Government orders of 22nd March, 21st May and 26th August, 1909

any appointments of which the salary is from Rs. 200 to Rs. 250 a month require the confirmation of the Director of Public Instruction; and those of which the salary exceeds Rs. 250 a month require confirmation of Government.

There are two financial systems in Government colleges. Funds are allotted to all colleges, except the Presidency and Sibpur Colleges, on the basis of a detailed assignment, within which they have limited powers of reappropriation. The governing bodies of the Presidency and Sibpur Colleges are given a consolidated grant, fixed for a certain period, over which they have larger though strictly defined powers.[1] The consolidated grant for the Sibpur College for the present period which runs from 1918-9 to 1921-2, is Rs. 51,500 a year. The Governing Body consists of the following ten members :—

1. The Member of Council in charge of Education	*Ex-officio* President.
2. The Secretary to the Government of Bengal, Public Works Department (Buildings Branch) . . .	*Ex-officio* Vice-President.
3. The Director of Public Instruction, Bengal	*Ex-officio* Members.
4. The Chief Inspector of Mines, India .	
5. The Superintendent of Industries .	
6. Mr. T. H. Richardson, Professor, Civil Engineering College, Sibpur .	Members.
7. Mr. E. H. Roberton, Professor, Civil Engineering College, Sibpur .	
8. Sir R. N. Mukherji, Martin & Co. .	
9. Mr. W. F. Harnett, Loco. and Carriage Superintendent, E. B. Ry., Kanchrapara	
10. The Principal, Civil Engineering College, Sibpur	*Ex-officio* Secretary.

(*n*) *Board of Visitors.*—There is also a Board of Visitors, created in 1880 and reformed in 1916. It is constituted at present of 40 members as follows[2] :—

Ex-officio.

1. The ten members of the Governing Body of the Civil Engineering College, Sibpur.

2. The ten members of the Mining Education Advisory Board.

[1] Government orders No. 1779 of 22nd March and 3574 of 26th August, 1909.

[2] The apparent number of places on the Board is 47, but the number of members is reduced to 40 owing to the fact that several persons are *ex-officio* members in different capacities.

3. The ten members of the Joint Technical Examination Board.
4. The Director of Public Instruction, Bihar and Orissa.
5. ,, ,, ,, Burma.
6. ,, ,, ,, Assam.
7. The Commissioner of the Burdwan Division.
8. The District Magistrate of Howrah.
9. The Civil Surgeon of Howrah.
10. The Inspector of European Schools, Bengal.
11. A representative of the East Indian Railway nominated by the Agent.
12. A representative of the Bengal Nagpur Railway nominated by the Agent.
13. A representative of the Eastern Bengal Railway nominated by the Agent.
14. The Deputy Director, Indian Marine, or an officer nominated by him.

Ordinary Members.

15. A representative of Messrs. Andrew Yule & Co.
16. Maharajah Sir Manindra Chandra Nandy, of Kasimbazar.
17. Mr. W. R. Steele, of Messrs. Burn & Co.
18. Colonel Grice, of Messrs. Smith, Stanistreet & Co.
19. Sir Nilratan Sircar.
20. Sir P. C. Ray.
21. Nawab A. F. M. Abdur Rahaman, Khan Bahadur.
22. Rai Jogendra Chandra Ghose Bahadur.

The ordinary members hold office for three years. The functions of the Board of Visitors are advisory; but they appoint a 'Domestic Sub-Committee' who select students for the free and reduced fee lists and fix the rate of boarding charges.

The Domestic Sub-Committee is constituted at present as follows:—

(1) The District Magistrate, Howrah.
(2) The Civil Surgeon, Howrah.
(3) The Inspector of European Schools, Bengal.
(4) Nawab A. F. M. Abdur Rahman, Khan Bahadur.
(5) Sir Nilratan Sircar.
(6) Rai Jogendra Chandra Ghose Bahadur.
(7) The Principal, Civil Engineering College.
(8) Mr. T. H. Richardson.

(*o*) *The Council.*—The staff are not formally organised as an academic body under the College regulations; the report of the university inspectors for 1916-17 and 1917-18 states however that there is a council of members of the teaching staff consisting of the heads of all the different departments, that all matters connected with the internal administration of the College are discussed by this council, and that it met 11 times during 1915-16, and 14 times during 1916-17.

III.—University organisation for Engineering.

41. We shall describe in Chapter XXVII, the general university organisation. It may be stated that there is a Faculty of Engineering consisting at present of six persons all of whom are members of the Senate and a Board of Studies in Engineering at present identical in personnel with the Faculty. The Faculty elects one member of the Syndicate from among its own members.

IV.—Engineering instruction in Calcutta or the neighbourhood given elsewhere than in Sibpur.

42. Except at Sibpur, there is no engineering instruction of a university character given anywhere in Bengal. The institutions enumerated below give instruction of a less advanced type.

(*a*) *The Bengal Technical Institute.*—This institute is at Maniktola, a north-eastern suburb of Calcutta and has a compound covering some ten acres. The institute was founded by the Bengal National Council of Education, and is managed by a council and executive committee including many distinguished Bengal educationalists. The courses are divided into four departments: an apprentice and a draughtsman's course each of two years, a primary course of three years, and a secondary department with a course of four years. In all the courses the main work consists of practical workshop training in carpentry, in the foundry, and the smithy, in metal working, in the machine shop and fitter's shop, in the power house and in electric fitting. The theoretical work includes courses in physics, chemistry, and theoretical and applied mathematics. The institute owns some full-sized machines which are too expensive to be fully run for educational purposes: it has therefore leased this plant to a firm of engineers who keep it at work and are bound by agreement, if desired, to engage some of the institute students as apprentices. The students of the institute enter for the technical examinations of the City and Guilds of London Institute.

(*b*) *The Calcutta Technical Night School.*—This school was established in 1900 and is subsidised by Messrs. Burn & Co., the East Indian Railway, Messrs. John King & Co., and Messrs. Jessop & Co., for the purpose of affording instruction to engineering apprentices, and it receives an annual grant of Rs. 2,000 from Government. Messrs. Nathan, Küchler and Everett reported in 1913 that in

spite of many drawbacks arising from inadequate funds and equipment the school was doing valuable work. They also reported that there were about 70 students of whom nearly 20 were Indians and that the bulk came from the works of Messrs. Burn & Co., Messrs. Jessop & Co., and the Mint; and that the two firms mentioned and the Mint made attendance at night-classes a condition of apprenticeship. The school has changed its premises several times. The classes are now held in the Calcutta Free School.

V.—Engineering Instruction in the Mufassal.

43. *The Dacca School of Engineering.*—This is a Government school and is housed in the compound of the Dacca College. Although the instruction is not of a university character and is entirely separate from that of the college, the school is nominally under the authority of the Principal of the College, to whom the head master is subordinate. The staff consists of the head master, who is a European, seven assistants and five foremen assistants. It has a good hostel for 200 students, excellent workshops and four lecture rooms. The school provides classes of three kinds :—

(*i*) The overseer and sub-overseer department (which the head master regards as the main department) corresponding to the similar departments at Sibpur, and controlled by the Joint Technical Examination Board.[1]

(*ii*) A survey department (the Amin classes) controlled by the Survey Examination Board, whose pupils can take certificates recognised by the Government Survey Department.

(*iii*) An artisan department whose pupils can take a certificate granted by the school.

The head master of the school informed us that the qualification for admission to the overseer and sub-overseer department is a pass at the Calcutta University matriculation examination and that "in most respects the overseer's department course corresponds with the college degree courses, such as the B. Sc. course, though the subjects are taught in a more applied way." He thought that the course would form a sound basis for the major part of a degree course but that for such a course there should be added a one year's course in three branches, (i) pure science, (ii) higher mathematics and (iii) higher civil engineering, of which the first two might be provided by the University of Dacca. He thought however that at present the need for men with degrees in civil engineering was more

[1] Paras. 40 (*f*) and (*g*) above.

than met by the output from Sibpur, though the demand might increase after the war. He pressed for a removal of the school from its present site to allow of expansion.[1]

(*a*) *Sub-overseer schools and Engineering technical schools in the mufassal.*—There are sub-overseer schools in engineering at Burdwan, Pabna, Rajshahi, and Kurseong (the Victoria School and the Goethals' Memorial Orphanage); and there are some classes in surveying at the Rangpur Technical School.[2]

Technical teaching is given in connexion with railway workshops at the following centres: Jamalpur (in Bihar and Orissa)—Kanchrapara, Khargpur and Lillooah.[3]

VI.—Mining Education.

44. *Backwardness of Mining Education in India.*—The mineral resources of India are large and exceptionally varied. Some of its minerals are not yet used and others are not used to their full advantage as they are exported as raw material. The minerals with the most valuable annual output[4] in 1917 were coal £4,511,645; gold £2,221,889; manganese ore £1,501,080; petroleum £1,092,964; iron ore, an output of 413,273 tons, of a value of £39,977; the total value of mineral production for the year was £13,351,364. In spite of the importance of the mineral industry in India, mining education has made but little progress. It would be most useful in connexion with coal; yet much of the coal occurs in thick shallow seams of which the mining is so easy and the coal so cheap that careful working would have been unprofitable. The mining of manganese and iron ores is mainly quarrying, for which little special mining experience is required. With gold mining, on the other hand, the chief mines are those of Mysore, and they are so deep, and the methods involved so elaborate that no young mining school in India could have supplied the training required; the

[1] We must not be taken to accept the head master's view in regard to the additions which would be required to provide a degree course in civil engineering in Dacca. We understand that other views are held in regard to the extent of such additions, and we have not investigated the matter in detail.

[2] Quinquennial Review on Progress of Education in Bengal, 1912-13 to 1916-17, by W. W. Hornell, paras. 378 and 420.

[3] According to a report of a sub-committee of the Governing Body of Sibpur College, an Indian is not admitted into the Kanchrapara shops unless he has passed into the matriculation class, nor into Lillooah unless he has completed the matriculation course. For admission to Khargpur the middle vernacular standard is required.

[4] Records of Geological Survey of India, Volume XLIX, 1918, pages 56, 57, 64.

chief appointments on this gold field have been given to men trained in the mining schools of Britain and America. Similarly, petroleum mining, owing to the difficult technical problems involved, has required training that India could not have supplied. The need for the provision of further mining education is widely recognised and in answer to the sixth of the questions circulated by the Commission, 41 correspondents mentioned mining as one of the callings for which high technical training should be given in India.

45. *The former prejudice amongst the Bengali* bhadralok *against mining as an occupation.*—The delay in the development of mining education in India has been due in part to the belief among those in charge of mines that the Bengali and the higher class Indians in other provinces would not work underground. Their impression as to the Bengali attitude towards mining is now rapidly changing. The evidence that has been reported to us on various mining fields shows that the Bengali is proving an efficient and useful miner. The men who are especially wanted at present are over-men, who receive wages of from Rs. 25 to Rs. 70 a month, and sirdars, who act underground as tally clerks, take measurements, prevent accumulation of gas, etc., and receive a pay of Rs. 50 a month. The work of these two grades of men would be improved by evening class instruction on the coalfields. There are also many openings for Indians as assistant managers on a salary of Rs. 200 a month. Some of the men in these posts are already proving competent and reliable, but they would be still more efficient if they had had a training at a school of mines. There is a limited opening for Indian managers of small mines at the rate of Rs. 300 a month; and the most efficient of these men might rise to still more responsible and better paid mining appointments.

It is reported that the work of Indian mine managers is apt to be hampered by their traditional prejudice against work that involves physical dirt and discomfort; but there are signs that this prejudice and the reluctance to undertake unpaid underground work as preliminary training have diminished during the past year. The Bengali in fact has begun to realise that mining work is a well-paid and interesting occupation, and there is a growing willingness to undertake it.

46. Mining education is at present mainly required in connexion with the coal industry, and it has therefore been mainly developed in Bengal. In spite of the transfer of the western coal-fields to Bihar and Orissa on the reorganisation of the political boundaries in 1912, the coal mines are still mainly administered from Calcutta. With the more extensive working and exploitation of the mineral resources of India, more varied types of mining and a mining school dealing with a wider range of subjects than is necessary in coal mining will become necessary. The mining education that has been provided hitherto may be divided into two very distinct grades—evening elementary classes on the coal-fields, and the more advanced training in mining engineering at Sibpur.

47. *Evening classes on the coal-fields.*—The evening classes, not being of a university grade, do not come within our terms of reference; but owing to their relations to the proposed mining school on the coal-fields, a brief summary of their work is advisable. The evening classes are conducted on the coal-fields of Bengal and Bihar, under the supervision of a Mining Education Advisory Board, which was established in December 1915 and which has recently been amalgamated with the Mining Sub-committee of the Board of Visitors of the Civil Engineering College at Sibpur. The cost of the classes is borne by the two Governments in the proportion of three-fifths by Bengal and two-fifths by Bihar and Orissa.

48. *The English lecture courses.*—The chief evening classes consist of a two years' course which is given in English by a British mining instructor; each course consists of 30 lectures; the first year course deals with geology, prospecting, mine gases and ventilation, and mining methods. The second year course is devoted to applied mechanics, steam, working by electricity and compressed air, methods of winding, pumping and hauling, surface equipment and coking. The lectures are given at five centres of which those at Jharia and Sijua are in Bihar, and those at Dishergarh, Raniganj and Charanpur (to be removed to Jamuria) are in Bengal. The lectures are given weekly from September to April. At the end of the course there is an examination for which only those students are qualified who have attended half the lectures and received 40 per cent. of the marks allotted for home work,

The attendances during the session 1916-17 were as follows :—

Centres.	Number on roll.	Average attendance.	Number who have attended 40 p.c. of the lectures and qualified to sit for the examination.	Number who sat at the annual examination.	Number who passed
Jharia	97	40·2	46	7	4
Sijua	75	28·3	28	8	7
Dishergarh	50	16·6	13	8	8
Ranigunj	59	24	24	10	7
Charanpur	31	7·4	7	...	...

118 candidates qualified ; 33 sat for the examination and 26 passed.

49. *Vernacular classes.*—The second type of evening classes are taught in the vernacular. Each course consists of five lectures; they are given in Bengali at the three centres Kalipahari, Charanpur and Mugma ; and in Hindi at the three centres in Bihar and Orissa, Joyrampur, Kurkend and Sijua. The attendance at Kalipahari and Mugma has an average of 25 ; at Charanpur 10, at Joyrampur 15, at Sijua 8 and at Kurkend 20. The total average attendance for 1916-17 was 103. The five lectures are upon—(1) geology and prospecting, (2) boring and sinking, (3) methods of working, (4) pillar extraction and timbering, (5) gases, ventilation and safety lamps.

50. *The Mining School of Ethora.*—The Maharajah of Kasimbazar, amongst his many public spirited contributions to education, has established a School of Mines at Ethora on the Ranigunj coal-field. The school is managed by an Advisory Board of which Mr. G. F. Adams, Chief Inspector of Mines for India, is President, and which includes many of the leading mining engineers of the Ranigunj field. The main object of the school is to train students for the Colliery Manager's examination. The course at the school lasts for three years, including periods of practical work in collieries. Students who have had not less than one or two years' practical experience in a coal mine are excused attendance at the first or first and second year courses respectively. There is a hostel attached to the school. The first year course

includes drawing, surveying, geology, prospecting, boring, sinking, the Indian Mines Act, arithmetic and writing. The second year course includes gases and ventilation, and further classes in surveying and colliery engineering. The third year course includes further surveying, hauling, pumping and transmission of power. The school has accommodation for 40 students, but we understand that such has been the increased demand for mining education that for the present session there have been 500 applicants for admission.

51. *The Industrial School on the Giridih coal-field.*—An excellent elementary industrial school which prepares some of its students for mining work is maintained by the East Indian Railway Company under the superintendence of Mr. G. C. Lathbury on the Giridih coal-field. The Company maintains on this coal-field four grades of schools—elementary, lower primary, upper primary, and industrial—for the benefit of the children of its workmen and miners. Selected boys from the primary schools are sent to the industrial school which is attached to the colliery workshops. The course includes drawing, mechanics, mathematics, and the properties of metals; it lasts for three years and part of the time is spent in practical work in the shops. All the education is in the vernacular. There are 50 students and two teachers. The students are paid one anna three pies a day with an annual increase of an anna a day provided they pass the examinations and receive a satisfactory report. After passing the final examination the pupils enter the workshops, whence some of them are sent as fitter-assistants to the coal mines. They are subsequently promoted to the post of fitters-in-charge with the pay of a rupee a day. The training at the industrial school is in mechanical engineering rather than in mining. The work is elementary but on its lines it seems most successful and useful.

52. *The Mining Department at Sibpur,*[1] *Calcutta.*—The highest mining education hitherto given in India has been that at the Civil Engineering College at Sibpur. It is part of the 'Apprentice Department' of the college and qualifies only for a college diploma and not for the university degree. The full course lasts four years, including two years' preliminary training which ends with the sub-overseer examination. After

[1] See also para. 16 above.

that examination follows the two years' advanced course which ends with the examination for the Government diploma in the principles of mining. The course for the diploma includes mine surveying, mining engineering, electric technology, mining, chemistry and geology. The diploma entitles its holder to a reduction in the period of underground service required for the colliery managers' certificate. Six weeks in each year is spent in camp on a coal-field in the practice of mine surveying and the study of mining methods. In order that the Sibpur mining course may be useful to students who do not require the full four years' course various reductions are authorised. Thus the four years' course may be reduced to three years in the case of students who have taken the first year of the special course in mechanical and electrical engineering and these students are excused the preliminary course and also the passing of the sub-overseers' examination. A further reduction was sanctioned in April 1917 by the Indian Government, as an experiment for five years, for the benefit of students from other provinces than Bengal, who found it difficult to pass the sub-overseers' examination or to spend three years at Sibpur. Students who have passed the overseer examination and will devote eight weeks of the college vacation to work in a colliery are not only excused the two years' preliminary training but may take the work for the diploma examination in one year instead of in two. It is hoped by these concessions that the mining courses of Sibpur will be rendered available for students from the other engineering colleges of India.

53. *Proposed School of Mines on a coal-field.*—The difficulty of students from outside Bengal in gaining access to the very restricted accommodation of the college at Sibpur has no doubt encouraged the movement in favour of a special mining school on the coal-fields.[1] A Mining Education Advisory Committee appointed by the Government of Bengal in consultation with the Government of Bihar and Orissa in 1913 under the chairmanship of Sir Duncan Macpherson proposed the improvement of the evening classes and the establishment of a mining school at Dhanbaid and the abolition of the Mining Department at Sibpur. A committee on technical education in Calcutta which had been appointed by the Government of Bengal had reported in May 1912

[1] See para. 11 above in regard to the first proposals on this subject.

that Calcutta was not a suitable place for instruction in mining, and recommended the foundation of a mining school at Asansol so as to be near the chief mining field of Bengal.[1] The Macpherson Committee agreed with the Calcutta Committee that mining education should be given near a coal-field but selected Dhanbaid as a more suitable site than Asansol on account of its more central position. The question was again dealt with by Mr. G. F. Adams, Chief Inspector of Mines for India, Mr. E. H. Roberton, Professor of Mining at Sibpur, and Mr. Glen George, the Chief Mining Engineer of the Bengal Coal Company, in an official report on 'Mining Education in England with special reference to India,' 1916. These experts agreed in the main with the proposals of the Macpherson Committee. They recommended[2] the establishment of a mining school either at Dhanbaid or Asansol which should train for the first-class colliery manager's certificate; but they did not recommend the institution of a mining degree in India at any rate for some years. The Mining School proposed by the Macpherson Committee was to cost Rs. 5,56,000 initial capital expenditure and Rs. 98,000 recurring; while the Committee proposed an extra expenditure of Rs. 1,51,000 as capital and Rs. 71,000 as recurring on the extension of the evening classes. The Macpherson Committee's estimate for the mining school was based upon the expectation of 48 students who would have a three years' course after twelve months' preliminary practical work in the mines.

[1] See para. 23 above.

[2] Report on Mining Education, etc. (Calcutta, Bengal Secretariat Book Depôt, 1916), page 10.

CHAPTER XXV.

AGRICULTURAL EDUCATION.[1]

I.—The general policy of agricultural education in India.

1. We propose in the present chapter to deal first with the general question of agriculture, and afterwards, and more briefly, with the minor, though important, special questions of forestry, sericulture and veterinary science.

2. The supreme economic importance of agriculture in Bengal may be realised from the fact that out of a total population of 46 millions, 35 millions are dependent on it as a means of livelihood.[2]

Yet at present there is not a single institution in the province giving agricultural education; the term does not even figure in the last Quinquennial Review of Education in Bengal. It is scarcely surprising that we should have found in the course of our enquiries a widespread and insistent demand for the provisions of facilities for such education in Bengal; and the University of Calcutta, in respon[illegible]to the demand, has recently adopted a scheme for degrees in a[illegible]ture which it has submitted for the approval of the Gov[illegible]nt, and to which we shall refer again later.

3. [illegible] subject of agricultural education is one which affects the whole [illegible]ndia and cannot be dealt with from the provincial aspect only. [illegible]with other branches of technology, the Government of India and the provincial Governments are bound to consider to what extent it is economical, to what extent disadvantageous, to provide Imperial, or inter-provincial, rather than provincial institutions, and in no subject more than in agriculture is this a matter of importance.

In order to gain a clear understanding of the present puzzling situation in Bengal and of the discussions which have taken place in regard to it, a brief sketch of the history of agricultural education in India generally is essential. The situation is dominated by the fact that the cultivators, of whom there are between two and three hundred million in India, are as a class illiterate, and

[1] See also Chapter II, paras. 15-17.

[2] *Cf.* Mr. L. S. S. O'Malley's *Bengal, Bihar,* etc., (Cambridge University Press), page 226 and passim.

that no direct instruction can be given to them except by oral teaching and actual demonstration.

4. An outline of the development of agricultural education down to the year 1901-2 was given in the Fourth Quinquennial Review on the Progress of Education in India[1] by Mr. R. Nathan, who represents the discussion on the subject as 'protracted, voluminous, and intricate,' the results, when measured by the vast field of possible achievement as 'inconsiderable.' Almost the same picture is produced on the reader's mind by a memorandum of Mr. J. MacKenna, the present Agricultural Adviser to the Government of India and Director of the Pusa Institute, issued in 1917, to which we shall refer later. But it is to be remembered that if the field of possible achievement is vast, the difficulties to be conquered are no less vast, that the provincial Governments and the Government of India since 1888 have given constant attention to the subject, and that much has been done.

An Agricultural Conference was held in 1888 which urged the necessity of educating teachers of the required kind, and a Government resolution of the same year placed on the Agricultural and Educational Departments in every province the o[illegible]gation to work out a practical scheme of agricultural education. [illegible]889, Dr. Voelcker, the Agricultural Chemist to the Royal Ag[illegible]ral Society of England, advised the Government of India on th[illegible]ject, and further resolutions affecting agricultural educat[illegible] were adopted by the Government of India in 1893 and 1897[illegible]. Among the conclusions of the resolution of 1897 were the following :—

(*a*) That agricultural degrees, diplomas, or certificates should be placed upon the same footing as corresponding literary or science degrees, etc., in qualifying for admission to Government appointments, and more particularly those connected with land-revenue administration.

(*b*) That there should be not more than four institutions giving a high class diploma, *viz.*, at Madras, Calcutta, Bombay, and some place in the North-Western Provinces,[2] and that these should be utilised [illegible]other provinces.

[1] Paras. 793 *et seq.*

[2] Now known as the United Provinces of Agra and Oudh.

(*c*) That the diploma should eventually be compulsory in the case of certain appointments, *e.g.*, of agricultural teachers in training schools, assistants to the Director of Agriculture, etc.

5. The Fourth Quinquennial Review above quoted shows that in 1901 there were five provincial institutions in British India for the technical teaching of agriculture—at Saidapet, near Madras (founded in 1876), at Poona (founded in 1879), at Nagpur (founded in 1886), at Cawnpore (founded in 1892), and the Agricultural Department of the Civil Engineering College at Sibpur, near Calcutta (opened in 1899). Of these the only school connected with a university was the Poona College, which then gave a three years' course for the degree of Licentiate in Agriculture of the Bombay University. Although the Sibpur College had at first provided a higher and a lower class, the higher class was abandoned in 1901 and the teaching restricted to one class with a two years' course.[1] The Review states that the arrangements for practical training at Sibpur were inadequate. The five institutions together had in 1901-2 an aggregate number of only 140 students.

6. The Universities Commission of 1902 expressed the view that "in a country like India, which is mainly agricultural, it would appear that agricultural teaching, both ordinary and superior, should be considered as essential." They considered that a higher course in agriculture should consist of practical and theoretical teaching in the sciences underlying or connected with scientific agriculture, accompanied by practical training on experimental farms, and that students who had completed a course of this kind in the colleges and passed an appropriate examination for a diploma at the end of their theoretical instruction should then be drafted on to a farm controlled by experts, and undergo subsequent training for a year or more in actual farm work. They expressed the view that it was an open question how far the universities could help in the latter course of training and suggested that it would not be easy for any university thoroughly to test it; but they thought that there was no reason why university tests should not be applied to the former or scientific part of

[1] Loc. cit., para. 804.

the training, as was done in the Bombay University.[1] The Commission formally recommended[2] that—

"the universities should, as far as possible, encourage agricultural studies, and should consider the desirability of granting diplomas for proficiency in the theoretical and scientific as opposed to the practical side of an agricultural course."

7. The appointment by Lord Curzon's Government of an Inspector General of Agriculture, aided by a nucleus staff of experts,[3] marked a new departure in agricultural policy for the whole of India[4]. The development of that policy in respect of agricultural education is set forth in the Government Resolution on Educational Policy of 11th March 1904. We quote below paragraph 37 of that resolution :—

"At present, therefore, while the necessity for developing the agricultural resources of the country is generally recognised, India possesses no institution capable of imparting a complete agricultural education. The existing schools and colleges have not wholly succeeded, either in theory or in practice. They have neither produced scientific experts, nor succeeded in attracting members of the land-holding classes to qualify themselves as practical agriculturists. Both of these defects must be supplied before any real progress can be looked for. In the first place an organisation must be created by which men qualified to carry on the work of research, and to raise the standard of teaching, can be trained in India itself. Before agriculture can be adequately taught in the vernacular, suitable text-books must be produced, and this can only be done by men who have learnt the subject in English. The Government of India have therefore under their consideration a scheme for the establishment of an Imperial Agricultural College in connection with an Experimental Farm and Research Laboratory, to be carried on under the general direction of the Inspector General of Agriculture, at which it is intended to provide a thorough training in all branches of agricultural science combined with constant practice in farming work and estate management. In addition to shorter courses for those students who are intended for lower posts, there will be courses of instruction, extending to five years, which will qualify men to fill posts in the Department of Agriculture itself, such as those of assistant directors, research experts, superintendents of farms, professors, teachers, and managers of court of wards and encumbered estates. It is hoped that a demand may arise among the land-owning classes for men with agricultural attainments and that the proposed institution may succeed in meeting that demand. Arrangements will also be made to admit to the higher courses

[1] Report, page 41.

[2] *Ibid.*, page 68.

[3] The office has, since 1912, been merged with that of Agricultural Adviser to the Government of India and Director of the Pusa Institute.

[4] See Fifth Quinquennial Review of the Progress of Education in India, 1902-1907, paras. 537 *et seq.*

those who have undergone preliminary training at the provincial colleges and thereby to exercise upon those colleges an influence tending gradually to raise their standard of efficiency."

8. The Government gave effect to the latter portion of their resolution by establishing the Imperial Agricultural College and Research Institute at Pusa (in Bihar), and devoted to it the greater portion of a donation of £30,000 made in 1903 by Mr. Henry Phipps, an American gentleman, for some object of public utility, preferably in the direction of scientific research.[1] The college, which is admirably staffed and equipped, and has an estate of some 1,300 acres was not formally opened to students until July 1908. It is now the leading agricultural institution in India.

9. Following on the resolution of 1904, the Government of India, in a despatch to the Secretary of State at the end of 1905,[2] defined in greater detail their general policy of which the salient points may be summed up as follows:—

There was to be established in each important province an agricultural college and research station, adequately equipped with laboratories and class rooms to which was to be attached a farm of suitable size. The superior staff would consist ultimately (it was hoped) of an expert agriculturist, an economic botanist, an agricultural chemist, an entomologist and a mycologist. The staff was to combine teaching with research work, the Government being convinced that research would ordinarily be more active and better sustained if it were associated with lecturing, which would 'check any tendency to the investigation of problems unlikely to lead to practical results.' The experts were to have ample leisure for research and for tours in connexion with their special subjects of study. Each institution, with the farm annexed, and a whole-time Director of Agriculture, was to form the nucleus out of which the fully organised department for the province would be developed with more or less rapidity according to local circumstances. There were to be, in addition to the experimental farm

[1] It appears indeed from the prospectus of the Pusa College of 1912 (the last issued) that Pusa owes its inception to this generous donation.

[2] The text is quoted at some length in the Fifth Quinquennial Review of the Progress of Education in India, para. 538.

attached to the college, other such farms for areas presenting characteristic features, and, in addition, demonstration plots to bring the practical results of experiment and research to the notice of the cultivators. The Government hoped that what Pusa was to be for the Indian Empire the agricultural colleges and research stations of the several provinces would be, on a smaller scale, for those provinces themselves. The Government desired that the provincial colleges should teach up to a three years' course and that the men who had during that course shown most scientific aptitude should be drafted to the Pusa Institute for a further two years' course of post-graduate study; and in that way they hoped gradually to arrange in India for the recruitment of their agricultural specialists.

10. In 1906, the Board of Agriculture framed a standard syllabus for the provincial colleges, providing for a full three years' course of instruction. The object in view was—

"to attract as far as possible students who have been brought up on the land and to turn out practical men with a general knowledge of agriculture and agricultural sciences, so as to fit them for upper subordinate posts in the Agricultural Departments and for employment as managers of Courts of Wards and private estates and, after extra training at Pusa, for work in specialised subjects."

Practical training in the field was to form part of the first year's work, so that undesirable students might be weeded out as early as possible.[1]

The Board of Agriculture, also in 1906, recommended that an identical form of degree or diploma should be given by all the provincial colleges, and recommended that some such title as Licentiate of Agriculture (L. Ag.) might suitably be given. But the Government of Bombay decided to maintain the system under which the College of Agriculture at Poona was affiliated to the University of Bombay and that University continued to grant the degree of Bachelor of Agriculture, which it had substituted or the degree of Licentiate.[2]

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[1] Fifth Quinquennial Review of the Progress of Education in India, 1902-1907, para. 551.

[2] Loc. cit., para. 552, and para. 5 above.

11. The policy sketched out in the preceding paragraphs has, for various reasons, not been carried out fully either in regard to the Imperial Institute at Pusa, or in any province, least of all in Bengal.

12. The Pusa Institute, though still called a college, has developed into an admirable institute for research, but has almost, if not entirely, ceased to teach,[1] and it appears to be the view of some distinguished members of its staff, in the evidence furnished to us, that agricultural research should be entirely divorced from agricultural teaching. These teachers would appear to prefer Pusa to be divested of its teaching functions; and they would debar the provincial colleges from carrying out research.

This view, it should be mentioned, is in opposition to that expressed by the recent Public Services Commission both in regard to Pusa and the provincial colleges; though the opposition is possibly more apparent than real. That Commission, though they stated that the weight of opinion was in favour of maintaining Pusa principally for research-work, recommended that training classes in agricultural research should be established at the Institute, the necessary additions being made to the staff for the purpose. "We are satisfied," they say in speaking of Pusa, "that there is no incompatibility between the two functions of teaching and research, but that, on the contrary, both gain by being conducted in close association, always provided that the staff is large enough to cope with the twofold task." They anticipated that a proportion, though not all, of the advanced students would be nominated by local Governments or universities.[2]

13. The scheme of provincial colleges was carried out in part.[3] The United Provinces School at Cawnpore was raised in 1906 to the status of a college conferring a diploma on its passed students, and the course was lengthened from two to three years.

[1] We are informed by the Pusa authorities (letter of 11th June 1918) that "the majority of students of Pusa are sent here by the provincial Governments or Native States according to their requirements. About 30 students have gone through the courses during the period of five years ending 31st March 1917. Besides the post-graduate students, a number of officers and assistants of other departments, such as Forest, Education, etc., have done research work in the laboratories of the Institute."

[2] Report of Public Services Commission, 1916, Annexure 1, paras. 6 and 9, pages 68, 69, 70.

[3] See Sixth Quinquennial Review of Progress of Education in India, 1907-12, by H. Sharp, paras. 381 *et seq.*

It was further greatly developed and provided with new buildings and excellent research laboratories, opened in 1911. It now has a four years' diploma course as well as a two-year vernacular course. The number of students in 1917 was 50 for the diploma, and 49 for the vernacular course; in 1918 the corresponding figures were 53 and 48. The Poona Agricultural College, as distinct from the Poona College of Science, was constituted in 1908 and was accommodated in new buildings in 1911-12.[1] It has a three years' course open to students who have pursued a course for one year in the Bombay University. The number of students was 111 in 1917-18, and will be 137 in 1918-19, a considerable number of entries having been refused for the first time. Thirty students took the bachelor's degree and five the college diploma in 1917. The course of the college at Nagpur was lengthened to three years in 1906 and has since been extended to four years, though the college also retains a two years' course. The number of students, which was only 8 in 1906, was 77 in 1917-18 and is estimated at 87 for 1918-19.[2] A new and larger college was opened at Coimbatore in the Madras Presidency in July 1909 to replace the school at Saidapet, and was stated in the Quinquennial Review (India) of 1907-12[3] to be—

"more successful than any other in India in obtaining a large proportion of students of the desired class; about half being the sons of land-owners whose object is to acquire a knowledge of practical farming which will enable them to manage their own properties to better advantage."

The total number of students in 1917-18 was 101. A new college was also established in 1909 at Lyallpur in the Punjab with a three years' course. In 1912, it had 49 students. In 1913, there were no fresh entries. In 1914, a four years' course was established, divided into two parts, a certificate being awarded at the end of the first two years, and the diploma of Licentiate in Agriculture at the end of the second two years. There were 83 students in 1916-17 and there were 202 applications for 40 vacancies in 1917-18. The college has just been affiliated to the Punjab University and the degree of B.Sc. in Agriculture will now be awarded at the end of

[1] The Commission visited the college and farm in November 1917.

[2] The figures have been supplied to us by the principal of the college.

[3] Para. 265.

the four years' course, which is being revised for this purpose.[1]

14. But, as will be seen, the new developments left Bengal entirely without any agricultural college.

The classes at Sibpur were closed in 1909 in view of the decision to establish an agricultural college at Sabour in Bihar, then forming part of the province of Bengal. The Sabour College was not opened till 1910 (temporary arrangements being made for Bengal students in the interval). But under the territorial readjustment of 1912 Sabour ceased to be within the limits of Bengal and the college is now under the control of the Department of Agriculture of Bihar and Orissa, although it continues to admit students from Bengal and is under the same management as when it was the agricultural college of Bengal. The college, which has a farm of over 200 acres, provides a two years' course qualifying for a college certificate. A three years' diploma course came to an end in March 1918. The present course, initiated in 1915-16, attempts to give a practical training in agriculture with science teaching of a much more elementary type than was given in the diploma course. The majority of the students are ignorant of the elements of the cultivator's art.[2] The proportion of students admissible into the Sabour College annually from the provinces of Bengal, Bihar and Orissa, and Assam are 20, 17, and 3, respectively. The numbers of students from Bengal actually admitted in recent years have been as follows:—1912-13, 9; 1913-14, 2; 1914-15, 4 (one left subsequently); 1915-16, 9; 1916-17, 11; 1917-18, 4.[3] A considerable proportion of the Bengal Sabour students are

[1] The figures are taken from information supplied by the Director of Agriculture for the Punjab. In the Annual Report of the Director for the year ending June the 30th, 1917, he attributes the present popularity of the college to two main reasons. "The first is that the college now leads on to a definite and well-paid career in Government service: the second is that the land-owning classes now realise that a training at the college will render their sons more fit to manage their estates than would have been the case otherwise, and that the possibilities of improved agricultural methods in the Punjab are not small. A third reason, just beginning to show itself, is that the college now gives a good scientific education, and is slowly beginning to attract those students who are keen on research in itself. At present the first of the reasons given above is the most powerful; but the second is also daily getting more so."

[2] Report of Agricultural Department, Bihar and Orissa, for year ending June 30th, 1917, page 3.

[3] The figures have been supplied to us by the officiating principal of the college.

stated in recent reports of the Bengal Department of Agriculture to have obtained Government appointments.

Under the Patna University Act (1917), section 11, no Indian university other than Patna can 'admit any educational institution in the province of Bihar and Orissa to any privilege whatever.' Under this provision, universities in Bengal would be presumably debarred from recognising any courses at Sabour as forming part of a course in agriculture.[1] At the recent Simla Conference[2] Mr. D. R. Sethi, the Deputy Director of Agriculture of Bihar and Orissa, said "that the Sabour College which was intended to meet the needs of Bengal, Bihar and Orissa, attracted very few students and then not of a very satisfactory type."

15. Despite the successful development of some of the colleges during the period in question, Mr. MacKenna, the present Agricultural Adviser to the Government of India, quite recently stated that 'the first few years of the Agricultural College scheme ended in disappointment and failure';[3] and in 1913 the Board of Agriculture decided that much greater latitude must be given to the provinces in the framing of their programmes of agricultural teaching, and that the teaching of agriculture must be adapted more to the general standard of education in the provinces and to the stage of knowledge reached through agricultural research and experiments. The Royal Commission on the Public Services reported in 1917 that representations had been made to them that "the agricultural colleges in some provinces, notably Bihar and Orissa, the United Provinces and the Punjab had failed in their purpose."[4] The Public Services Commissioners do not endorse this statement; and from the evidence of some members of our own body we should be loth to accept it in regard to the one college on this list which we visited (the Cawnpore College). But it would be difficult to maintain that Sabour has been successful as a training ground for Bengali students.

The Commissioners do not appear to have been discouraged by the existing state of the provincial colleges. On the contrary

[1] For a general discussion of the point here raised see Chapter XXIX on Inter-University Relations, and Chapter XXXIII on the University of Dacca, paras. 220-221.

[2] See para. 19 below.

[3] Memorandum included in the Proceedings of the Conference on Agricultural Education held at Simla, on 18th, 19th and 20th June 1917 (pages 4 and 71).

[4] Report of Public Services Commission, Annexure 1, para. 5, page 68.

they endorse the policy of the Government of India of 1905 [1]; they write (in continuation of the passage just quoted) as follows :—

"This is primarily an administrative problem but it has a direct bearing also on the organisation of the service for the work it has to discharge. We recommend that the staff and equipment of each provincial college should be maintained on a scale adequate not only for the instruction of students up to the standard required for direct admission to the provincial service, but also for the effective prosecution of research, including the necessary experimental work relating thereto. It should be recognised that a great part of the research work in India can best be accomplished in the provincial centres where conditions of climate and soil are suitable. The development of provincial research work and experiment should be encouraged, and such work should not be regarded as necessarily of less importance than the work which is being carried out at Pusa. Each college should be regarded as an integral factor in the scientific development of the industry on which the prosperity of India mainly depends."[2]

II.—Recent conferences on agricultural education in India.

16. In the judgment, perhaps over-severe, of Mr. J. MacKenna, the results of the schemes of agricultural education, tried or recommended up to the present, have been insignificant ;[3] certainly not from the want of pains spent on the subject. With a view, if possible, to make definite progress towards a new policy, the Government have summoned three conferences on the subject within the last three years : the first, an informal conference, at Pusa, the second at Simla, the third at Poona.

It is important for our purpose to take into account the policy of agricultural education and trend of expert opinion in regard to India generally, as expressed at these conferences, before examining in detail the special needs of Bengal, and the evidence furnished to us in regard to the best way to meet those needs.

In what follows we have restricted our summaries and comments mainly to those portions of the proceedings which dealt specifically with colleges and not with schools[4] ; but, as Sir Claude Hill, who presided over the first two conferences, has pointed out, every phase of agricultural education involves all the others ; and if there are to be secondary agricultural schools, the teachers for

[1] See para. 9 above.

[2] Report of Public Services Commission, Annexure 1, para. 5, page 68.

[3] Proceedings of Conference on Agricultural Education held at Simla, 1917, page 65.

[4] We have printed the resolutions of the three conferences in full in the volume of appendices to this report, so as to give a complete view of the policy advocated.

those schools must be trained in colleges, and the output of the colleges correspondingly increased.

17. At the Conference held at Pusa, on 4th and 5th February 1916,[1] the following list of subjects relating to agricultural colleges was considered (in addition to other questions) :—

"1. Should the objective of agricultural colleges be merely the provision of suitable candidates for service in the Agricultural Department or should they aim at providing a liberal and scientific education in agriculture which would be as complete as possible and would attract not only students who aspire to the higher posts in the Agricultural Department, but others who wish to take up higher studies and research work in agriculture for their own sake.

2. Is it possible to combine both these aims, and if so, would it be an advantage if the colleges were affiliated to the different universities ?

3. If both aims were combined, is the best method of procedure the combination of a two years' course, intended mainly for subordinate posts in the Agricultural Department, with a further course of a more scientific character which would lead up to the full diploma or to a B.Sc. degree, the total length of the two courses being about four years ?

4. Is it desirable that any instruction in the vernacular should be given at the agricultural colleges either in the form of the two years' course referred to in (3) or in that of short vernacular courses outside the ordinary college courses intended for the sons of zamindars and others farming their own lands ?"

18. The President, in his introductory address, put forward the view that the needs were 'first and all the time to improve the agricultural methods of the country;' that for that purpose they must have (*a*) scientific investigation, (*b*) courses of instruction to fit Indians to help in those investigations, (*c*) instruction in practical agriculture, (*d*) courses of practical and theoretical instruction to fit men to give the instruction in practical agriculture, and also to qualify for the subordinate appointments in the agricultural service; and, finally, (*e*) instruction for agriculturists; and that the colleges had been established for, and aimed at meeting the requirements of (*a*), (*b*), (*c*), and (*d*).

In summing up, Sir Claude Hill suggested that before affiliating a college a university would make certain demands in regard to standard, and that these demands for time and assistance might

[1] The Conference was presided over by Mr. (now Sir) Claude Hill, member in charge of the Revenue and Agricultural Department of the Government of India, and included Mr. G. Coventry, then Agricultural Adviser to Government of India, Mr. C. F. de la Fosse, Director of Public Instruction in the United Provinces, and eleven representatives of the provincial Governments. A printed copy of the proceedings has been furnished to us. For text of the resolutions of the Conference, see the volume of appendices to this report.

in some cases involve trenching on the efficiency of the Department's activities in connexion with the improvement of agriculture and agricultural research; but he stated that in his view the establishment must be sufficient to enable justice to be done to both aspects. He did not interpret into the trend of the discussion any hostility to the abstract idea of aiming at affiliation in the case of those colleges in which there was a demand for affiliation on the score of liberalisation of education and where the staff could be shown to be adequate to cope with both sides of the college activities. He proposed that the conference should deal with the question 'in such a way as to indicate agreement with the abstract proposition that affiliation is desirable in the interests both of the colleges themselves and the department [of agriculture] provided that the staff requirements are met and affiliation will not result in the sacrifice of the efficiency of the departmental side of the college's interests.' He finally suggested the possibility of one college for Upper India, leaving the others as departmental institutions.

The following resolutions were agreed to in regard to topics (1) and (2)[1]:—

Agricultural colleges (1).

"The Conference considered that this question could not be answered absolutely. While as an absolute proposition they were in favour of providing in colleges under the Agricultural Department, a liberal and scientific education which should be as complete as possible, they were not convinced that in the case of all the provincial colleges this was a practical ideal or one which local conditions rendered desirable. For example, there were not enough students in any of the four colleges of Upper India to justify in any individual case the provision of training of the type intended. On the other hand, it is in the opinion of the Conference, desirable that Upper India should have one college at which the education should not be restricted to the training of men for departmental requirements—provided that the necessary staff and equipment can be made available for such college without prejudicing the normal development of the general work of the Agricultural Department."

Agricultural colleges (2).

"At the President's suggestion the Conference agreed to record that the answer to the second question in the agenda was implied in the resolution recorded with regard to the first—the two having in fact been considered together."

[1] See para. 17 above.

19. The Simla Conference was held on 18th, 19th and 20th June, 1917, to discuss the Pusa resolutions.[1] The Conference also had before it an important memorandum by Mr. J. MacKenna from which we have already quoted certain passages.

In his introductory speech, Sir Claude Hill drew the attention of the Conference specially to the necessity for training agricultural teachers, if agricultural high and middle schools were to be established, as he hoped they would; he suggested that the staff for such schools would be presumably trained in the agricultural colleges and expressed the emphatic opinion that the training and turning out of the teachers should precede the inauguration of the schools.

The discussion dealt largely with the question of the establishment of agricultural high schools and the training of teachers. But the question of agricultural colleges was also explicitly dealt with.

It was evident that the conditions had changed since the Pusa Conference, the representatives of the Punjab and the United Provinces being emphatic that there was now a demand for a high grade agricultural college in each of these provinces. 'This demand,' says the report, 'was not felt to the same extent in the other provinces, Bengal, Bihar and Orissa, and the Central Provinces.' But Mr. (now Sir) Frank Sly strongly urged the policy of maintaining a college in each province and of each province doing its best with its own college and raising it to the standard it required; and he pressed for a modification of Resolution I of the Pusa Conference.[2] Mr. Bhupendranath Basu, in supporting Mr. Sly, urged in particular the establishment of a separate institution for Bengal to which perhaps Assam boys might come. The following resolution, proposed by Mr. MacKenna, was passed unanimously[3]:—

"*Resolution VII.*—In view of the resolutions which have been passed at this Conference, and of the changing conditions as affecting the expansion

[1] Like the Pusa Conference, the Simla Conference was under the presidency of Sir Claude Hill; it included the Agricultural Adviser and other members of the Department of Agriculture, a representative of the Imperial Department of Education (Mr. H. Sharp) and representatives of the local Governments. Of the 21 members present, only four had been present at Pusa. A printed copy of the proceedings (Government Central Press, Simla, 1917) has been furnished to us.

[2] See para. 18 above.

[3] The complete text of the resolutions adopted at the Simla Conference is set out in the volume of appendices to this report.

of provincial departments of agriculture, the Conference consider that Resolution I relating to agricultural colleges which was passed at the Pusa Conference should be modified and that local Governments should be left to work out their collegiate courses with reference to local conditions. They consider that each of the principal colleges of India should have its own agricultural college so soon as the agricultural development of the province justifies that step."

The question of the affiliation of such agricultural colleges to local universities was next discussed.

Dr. Harold Mann, then Principal of Poona Agricultural College (affiliated to the Bombay University), relying on his own experience, asked the Conference to declare that in so far as the colleges are intended to give the highest agricultural training possible suited to the conditions of India, they should be affiliated to the universities, while there was not the same need for affiliation in so far as they were intended to serve departmental interests purely or principally; and that there was an opening for a college of the first type in most of the provinces. But the following neutral amendment, proposed by Mr. Sly, was carried by nine votes to six and adopted as a resolution :—

"*Resolution VIII.*—The Conference recommend that the question of affiliation of agricultural colleges should be left to the decision of local Governments in accordance with local conditions."

We may further draw attention to the suggestions of the Conference that the Education Department should endeavour to recruit as inspectors or district deputy inspectors of schools a larger proportion of science or agricultural graduates, and that short courses on special subjects should be given on Government farms as part of the demonstration work. Both these suggestions, if carried out, would presumably to some extent increase the demand for graduates in agriculture.

20. The Poona Conference formed part of a meeting of the Board of Agriculture held on December 10th-16th 1917 and presided over by Mr. MacKenna.[1]

The following resolution of a general character was adopted by the Conference :—

"That an improvement in the economic condition of the agricultural population of India is a matter of the most fundamental and urgent import-

[1] The meeting dealt with a number of other subjects in addition to agricultural education, and was attended by 48 members of the Department and 43 'visitors' from various provinces, including His Excellency Lord Willingdon, who gave an introductory address, and Sir Claude Hill.

ance to the country... That for the rapid development of agriculture in India a sound system of rural education based on rural needs is essential, that the present system is wholly inadequate in respect of the provision of suitable text-books and premises, and above all in respect of the training and pay of teachers....."[1]

In regard to the question of agricultural colleges the following resolution was adopted :—

"That the view of the Simla Conference 'that each of the principal provinces should have its own agricultural college so soon as the agricultural development of the province justifies that step' is accepted, the question of the affiliation of such colleges being left to the decision of the Government concerned."

21. The educational policy which emerges as a result of the three conferences may, perhaps, be briefly summarised as follows :—

(*a*) The direct instruction of the persons engaged in agriculture must for the present be given by means of and in connexion with demonstration farms. That teaching will probably create a demand for 'definitely agricultural schools;' and if such schools are started it will be necessary to supply them with trained teachers. In the meantime only a small number of middle agricultural schools should be started. Thus agricultural colleges will not be required in the near future to produce any large number of trained teachers.

(*b*) Whatever expenditure may be undertaken in connexion with general, rural, or definitely agricultural, education, there should be no resulting diminution in, or limitation of the funds of, or staff that are necessary for, the maintenance and progressive development of the research and demonstration work which are the main work of the Agricultural Department (Poona Resolution 13).

(*c*) The development of agricultural colleges in the various provinces is desirable, but the development of these colleges and their relationship with local universities must depend on local conditions.

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[1] The complete text of the resolutions adopted at the Conference on Agricultural Education is set out in the volume of appendices to this report.

Together with these conclusions we may draw attention to an important passage in the memorandum of Mr. MacKenna previously quoted [1]:—

"The necessity for providing a certain number of colleges in India with a liberal and scientific education of a high standard is accentuated by the findings of the Public Services Commission. In pursuance of the recommendations of that Commission, the Agricultural Department in its superior grades will ultimately be manned mainly by Indians and it is in every way desirable that such Indians should be trained at an Indian college of agriculture supplemented by a post-graduate course at Pusa."

22. In addition to the views expressed at the conferences we have had the benefit of advice given to us in response to our questionnaire and to special enquiries.

Some of our correspondents, expert and non-expert (though only a few of the latter), are of opinion that agriculture lies outside the sphere of university work. Thus Mrs. G. L. C. Howard of the Pusa staff writes [2]—

"Technological subjects like agriculture are not in my opinion suitable subjects for degrees or for the universities to deal with. Agriculture is an art and not a branch of science and cannot, therefore, be tested by any university examination. It is a fallacy to consider that such a thing as agricultural science exists as apart from pure science. The scientific principles involved in agriculture and in pure science are the same; for example, the so-called agricultural botany is only botany illustrated by means of agricultural crops rather than by wild plants. Both technological and other science students should, therefore, have the same grounding in the principles of the science involved. To provide such scientific training is the function of the University. When we pass from science to technology we are dealing with another thing which can best be dealt with in special technological institutes. These technological institutes should deal also with research and should draw their advanced students from the existing science colleges."

Mr. F. M. Howlett, the Imperial Pathological Entomologist at Pusa, adopts much the same line of argument as Mrs. Howard. He insists that what is now required in India is not a training in general agriculture but the education of specialists in the various sciences upon which agriculture is based. He writes (in a letter to one of our members):—

"In the Agricultural Department there is a growing demand for men with a good training in one or more branches of science; these men are wanted mainly as laboratory assistants or fieldmen. There is practically no demand at all, so far as I know for 'general agriculturalists'."

[1] See footnote to para. 15 above.

[2] Question 7.

He adds that it is—

"undesirable and unlikely that there will be, in the comparatively near future, any considerable increase in the number of posts open to general agriculturalists, as opposed to men with a good general or special scientific training such as will fit them for research or laboratory posts. There is a notable amount of truth in the saying that 'agriculture is an art based on sciences.' The Indian cultivator has the art, and we are now realising that it is our business to supply a sounder basis of 'sciences' than the (by no means inefficient) traditional system which is at present the guide. A university such as Calcutta can never supply the art; it may supply the separate sciences, and so help to unravel in time the tangled problems of Indian agriculture. I say 'separate,' because there is more demand for specialists."

The argument that agriculture is an art and not a science applies probably as much to medicine as to agriculture. Yet no one would suggest now-a-days that medicine is a subject unsuitable for university study.

Mr. E. J. Butler, the Imperial Mycologist, also a member of the Pusa staff, takes a view materially, though not wholly, different from his colleagues. He urges first that the University will be more useful to workers in applied science if it takes a broad view of pure science as the foundation on which all utilitarian progress must be based before it pledges its resources to the direct encouragement of technological studies. And he urges very strongly that the University should devote its attention to tropical biology, now comparatively little studied in Indian universities, and establish as soon as possible chairs, lectureships, and post-graduate scholarships in such subjects as plant physiology, cryptogamic botany, and entomology.[1] He continues as follows[2]:—

"Provided that, as suggested in the answer to Question 6 [the passage referred to above] the University can adequately cover the field without interfering with its primary functions in the pursuit and extension of knowledge as an end in itself, there would seem to be considerable advantage in having technological faculties or departments granting degrees in such subjects as agriculture. Such faculties should prove a valuable corrective to the over-literary trend of university education in India and may attract a class of undergraduate which it is desirable to get into the University in increasing numbers. I refer to the class which is not afraid of manual training and not prejudiced against industrial pursuits. That such a class exists and is

[1] Question 6.
[2] Question 7.

prepared to take advantage of higher training is evident from the experience of such colleges as the Engineering College at Sibpur and of some of the agricultural colleges. I believe it has not been sufficiently attracted to the University in Bengal for reasons I am not competent to explain, but it seems likely that if facilities are given for taking degrees in subjects that will appeal to the less literary castes, they will be prepared to enter the University. Not only will graduates from these faculties be better equipped to earn their livelihood than if they had not passed through the University, but they will provide better material for recruitment to several Government departments than is at present available. I should personally prefer to take graduates of this class into my laboratory than those of the more literary castes who are mainly available at present.

I am more doubtful of the necessity of providing facilities for research in subjects for which special research institutes already exist, as in agriculture. There may be a danger of diminishing research in those directions in which, as indicated [in the passage referred to above], the University can best assist the advancement of knowledge."

III.—The prospects of higher agricultural education in Bengal.

23. Apart from the question of the special conditions of Bengal (and the point relating to caste, which we shall touch on later) we are inclined to share the views of Mr. Butler, which appear to coincide with the views generally held in other countries. We think there should be in India, far from the congestion of great cities, one or more large agricultural institutes like that at Pusa, where experiments on a large scale can be carried on, and where the staff are not required to undertake any teaching except the supervision of training in research and the delivery of such higher courses as may be incidental thereto; we agree in this matter with the Public Services Commission. Such institutes are expensive and must be Imperial or inter-provincial. But they leave room open for the provincial agricultural colleges for teaching and research proposed in 1905 by the Government of India. And we have now to enquire whether in the first place the 'agricultural development' of Bengal, to quote the phrase of the Simla Conference, justifies the creation of one or more such colleges, and in the second place, what should be the relation between any such college and the local university.

24. The special characteristics of agriculture in Bengal may be summed up as follows:—

(*a*) Rice is the main crop, occupying two-thirds of the whole cropped area, and constituting the staple food of the people. Next in importance are jute, tobacco, sugar-

cane, various pulses, oilseeds, and tea. The variety of crops is relatively small.[1]

(*b*) There are complaints that the use of cow-dung as fuel instead of manure, and the inability of the cultivator, who is burdened with debt (as in other provinces), to purchase artificial manure have impoverished the soil. The methods employed are often primitive.

(*c*) The majority of holdings are very small in size, thus rendering large farming impossible, except in rare cases.

(*d*) The margin of profit on land available for its improvement is diminishing with an increase in the number of persons indirectly dependent on the production of the soil.[2]

(*e*) It is stated that the cultivators are ignorant. The conclusion is sometimes drawn that cultivators can only use 'rule of thumb methods' with safety and that expert advice is therefore largely useless. Opinions in regard to the ignorance of the cultivator (unless by ignorance is meant illiteracy) are however, by no means, unanimous. Mr. Howlett says the cultivator possesses the art of agriculture (as opposed to the science).[3]

(*f*) Not only, it is said, are the cultivators ignorant, but as they become 'educated,' they tend to give up cultivation.

(*g*) Bengal is backward in the development of demonstration work, as compared with other provinces.[4] Mr. S. Milligan, the Director of Agriculture for the province, informed us that he hoped to start a small demonstra-

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[1] *Cf.* Mr. L. S. S. O'Malley's *Bengal, Bihar and Orissa*, etc. (Cambridge University Press), *passim*. Very little cotton is at present grown in Bengal; but His Excellency Lord Ronaldshay, in a speech at Barisal on 11th July 1918, suggested that in many villages in Bengal cotton might be grown by cultivators for their own use and stated that he had invited the Agricultural Association of Bengal to consider the possibility of reviving cotton-spinning as a cottage industry in the province.

[2] "Continued sub-division and sub-infeudation of rights," say the Bengal District Administration Committee, "have immensely increased the number of persons who depend for their livelihood on the difference between what the tiller of the soil pays to his immediate superiors and what is ultimately paid to Government by the zamindar." Report, page 172.

[3] There is an interesting passage on this point in the Report of the Bengal Provincial Committee to the Education Commission of 1882, page 62.

[4] *Cf.* Bengal District Administration Committee's Report, pages 188-189.

tion farm in those districts, some 20 in all, not yet provided with farms[1]; and Mr. J. N. Gupta strongly emphasises the need for them.[2]

Statements (*c*), (*f*), and (*g*) above need further detailed consideration.

25. "The question of the size of estates and holdings," says Mr. L. Birley, of the Bengal Revenue Department, in a valuable memorandum printed in the volume of appendices to this report, "is of paramount importance in considering the probabilities of openings in Bengal for men with a scientific training in agriculture;" and he continues:—

"statistics are not readily available as regards the number of estates exceeding 400 acres,[3] and they have not been prepared regarding the size of holdings, but it may safely be said that the number of *estates* exceeding 400 acres is so large as to leave no doubt that if the proprietor of an estate of 400 acres would employ a scientific agriculturist the openings would be sufficiently numerous to justify the training of such men in large numbers, but that *holdings* of this area are either non-existent or are so few as to be negligible."

Mr. Birley explains that he uses the terms 'estate' and 'holding' in their meaning in the Bengal Tenancy Act, *i.e.*, an 'estate' is the interest of a proprietor and means the land for which land revenue is separately paid, while a 'holding' is land held by a 'raiyat.' The figures gathered from the returns of the Court of Wards throw some additional light on the subject of the size of estates. In the year 1916-17[4] there were under the Court 59 estates altogether, with a total area, as far as ascertained, of 10,804,122 acres and total receipts of Rs. 66,83,934, nearly 67 lakhs.

These may be classified according to size as follows:—

Over 600,000 acres	1
Between 200,000 and 300,000 acres	2
,, 100,000 and 200,000 ,,	4
,, 80,000 and 100,000 ,,	2
,, 50,000 and 80,000 ,,	2
,, 30,000 and 50,000 ,,	4
,, 10,000 and 30,000 ,,	9

[1] General Memoranda, page 12.

[2] *Ibid.*, page 2.

[3] The area mentioned in the letter to Mr. Birley which elicited his memorandum.

[4] See Report of Wards, Attached and Trust Estates in the Presidency of Bengal for 1916-17. (Bengal Secretariat Book Depôt, 1917.)

As the estates under the Court of Wards do not constitute one-fiftieth part of the province, it is clear that the number of large estates must be very considerable. But Mr. Birley's memorandum shows, on the one hand, how small a proportion of these estates is held by the proprietors as 'private land' which they cultivate themselves, and, on the other, how small are the actual holdings which are cultivated by tenants. "If an inhabitant of Bengal," he says, "finds himself in possession of a larger area of land than is necessary for the sustenance of himself and his dependents, the first inclination is to sublet all that he does not require for himself." The question is further complicated by the fact that large estates are in most cases not held by one individual but by a body of co-sharers, between whom combined action is difficult.

Mr. Birley discusses the cases in which it might be thought that it would be to the direct interest of the landlord to make use of expert advice. He points out that there is a marked increase in Eastern Bengal of land held on 'produce-rent,' *i.e.*, on a system analogous to the *métayer* system, in which the landlord takes a share of the produce (in Bengal, half) as rent. But the tenant in these cases, it would appear, does not always cultivate with the same zeal as when he pays a fixed rent, and is less likely to spend trouble on improvements.

In regard to land held under fixed rents, we cannot do better than quote Mr. Birley's own words:—

"It is convenient to divide the kinds of agricultural improvement which appear possible in Bengal into four classes as follows:—

(*a*) The introduction of new crops, and the improvement of existing crops by means of the use of improved seed, manure, or improved implements.

(*b*) The prevention of disease among crops.

(*c*) The improvement of agricultural stock.

(*d*) (*i*) The construction of wells, tanks, water-channels and other works for the storage, supply or distribution of water for the purposes of agriculture, or for the use of men and cattle employed in agriculture;

(*ii*) the preparation of land for irrigations;

(*iii*) the drainage, reclamation from rivers or other waters, or protection from floods, or from erosion or other damage by water, of land used for agricultural purposes, or waste land which is cultivable;

(*iv*) the reclamation, clearance, enclosure or permanent improvement of land for agricultural purposes.

(*N.B.*—For reasons to be explained below this class of agricultural improvement has been described in the words of section 76 of the Bengal Tenancy Act which enumerates works which are 'improvements' according to the law.)

Now as a rent collector, the landlord (whether a proprietor or large tenure-holder) is benefited only indirectly by the success of measures taken for the first three classes of improvements. It is on improvements of these three classes that the attention of the Department of Agriculture in Bengal is mainly concentrated, and under prevailing conditions it seems probable that scientific work on these objects will continue to be carried out collectively, that is by Government (and it is to be hoped by local authorities) but not by individuals.

The rent-collector landlord has no difficulty in finding a cheap agency to collect his rent; for the highly paid members of his staff a thorough knowledge of legal technicalities is necessary, and it seems very unlikely that there should ever be in Bengal a large demand for highly paid agents whose qualifications consist mainly in training in these branches of agriculture.

On the other hand, the attitude of a rent-collecting landlord to the fourth class of agricultural improvements may reasonably be expected to be quite different, because they offer him opportunities of increasing his income. The law on the subject of this class of improvement is briefly as follows: the landlord may carry out the improvement unless the tenant will do it himself; the landlord after executing the improvement causes it to be registered, and he may bring a suit for enhancement of rent on the ground that the productive powers of the land have been increased by an improvement effected by him or at his expense, and the Court will have regard to the cost of the improvement; on the other hand, an occupancy raiyat may sue for reduction of rent on the ground that the soil of his holding has without the fault of the raiyat become permanently deteriorated by a deposit of sand or other specific cause.

It will be observed that the fourth class of improvements requires a knowledge of agricultural engineering. There seems every reason to believe that there would be a fair demand in Bengal for men with practical as well as scientific training in agricultural engineering. The necessity of practical training is emphasised because in flat country like that of Bengal such work involves peculiar difficulties. These views are not based only on a calculation of probabilities, but also on my experience as the managing collector of large estates under the Court of Wards in Bengal and Orissa. The interests of the proprietor do not justify the appointment by the estate of an agricultural expert in the ordinary sense, but in every estate with which I have been concerned I could have employed with profit to the estate a man with a sound training as an agricultural engineer."

If Mr. Birley's views are accepted it seems clear that agricultural experts, with the exception of the category which he specifies, must look forward in Bengal mainly to employment by communities rather than by individuals.

26. In connexion with the problem of the employment of agricultural experts by landowners, we may draw attention to the special and important case in which the Court of Wards acts for a proprietor during his minority. Since the reform under Lord Curzon's administration, the training of officers for the Court of Wards has at various terms been stated to be one of the objects of agricultural education[1]; but, so far as we are aware, the agricultural training open to Bengal students has not been used to any appreciable extent for this purpose. The total number of 'managers' with salaries of over Rs. 100 employed in Bengal by the Court in 1916-17 was, it is true, only 19. The number of wards (boys) in Bengal in 1916-17 was 98.

Attention may also be drawn here to two points relating to wards which bear on our special problem :—

(*a*) Under section 21 of the Bengal Court of Wards Act of 1879, "The Court may make such orders as to it may seem fit in respect of the ..... education and residence of a minor ward."

(*b*) The Court of Wards now requires that steps shall be taken gradually to teach its wards the business of their estates between the ages of 18 and 21[2]; and we understand this to imply that they shall receive some training in agriculture and estate-management.[3]

It seems clear that if the Court were convinced that the best available training in these subjects were offered in a Bengal college or university, they would utilise it for the education of their wards.

The duty of acting as guardian for wards devolves on the District Officer, and Mr. Birley, speaking as Collector of Dacca, in giving evidence before the District Administration Committee pointed out how heavy an additional charge this was on the Collector, especially in connexion with the difficulty of redressing the grievances of *raiyats*.[4]

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[1] See para. 7 above.

[2] *Cf.* Bengal Wards' Manual, 1909, page 21 and Chapter XIX, Sec. 215, page 90.

[3] Report of Wards, Attached and Trust Estates in ..... Bengal, for 1916-17, paras. 14 and 15, and the Report of the Wards, Encumbered, Trust and Attached Estates in Bihar and Orissa for 1916-17 (Patna, 1917), para. 13, show that in both provinces the Court of Wards is making agricultural experiments with a view to improving the estates of the wards.

[4] Report of Bengal District Administration Committee, page 24.

The question of the duties of administrative officials lies entirely outside our reference. But in view of the immense personal and agricultural interests involved in the administration of the estates under the Court of Wards, it occurs to us that, apart from the question of the relief desired by the District Administration Committee for over-worked officers, it would be probably in the interest of the estates in question, and of the progress of agriculture in the province, if persons specially trained in agriculture and estate management were appointed to supervise these estates.

27. We have referred in paragraph 24 (*g*) above to the comparatively small number of demonstration farms in Bengal. It is interesting to note that the establishment of 'experimental farms .... under the superintendence of proper persons selected by Government' was suggested as a means of agricultural education by the Court of Directors of the East India Company in a revenue letter[1] to Bengal in 1812.[2]

[1] Quoted in Adams's Reports on Vernacular Education in Bengal and Bihar, Long's edition, pages 337—338.

[2] Demonstration and experimental farms have been of the highest service to agriculture in Europe and America. Farms of this kind have been started under favourable conditions in Bengal. Members of the Commission have had the opportunity of inspecting the Government farms at Chinsura, Dacca, Rajshahi and Rangpur. In addition there is a farm at Kalimpong, one at Burdwan, maintained at the expense of the Maharajah of Burdwan, and the Burirhat Tobacco Farm near Rangpur. At Chinsura the Farm (of 210 acres in area) is in an accessible position beside the railway station. The main work conducted there consists of experiments in the cultivation of paddy, jute, bananas and sugarcane, and also in seed selection. It had last year 19 students in training, each of whom receives an allowance of Rs. 15 a month and free quarters. The Government Farm at Rajshahi is smaller, the area being 63 acres; it follows similar lines, but a larger proportion of the land is devoted to sugarcane. At Dacca, in addition to the farm which is carrying out important work or the production of staple crops (especially on paddy by Mr. G. P. Hector, and on fibre crops by Mr. R. S. Finlow), there is a group of laboratories for the investigation of fibres, of plant diseases, insect pests, and chemical work, including the soil analyses for Bengal. Several Calcutta graduates have worked there with enthusiasm and success. The Government agricultural stations at Rangpur under the superintendence of Mr. J. N. Chakravarty include two farms, a 20-acre Demonstration Farm situated in the town and a Government Dairy Farm. The Demonstration Farm is constantly inspected by the cultivators of the neighbourhood and they eagerly purchase the whole of the selected seeds raised on the Farm. The main object of the Government Dairy Farm is the improvement of indigenous cattle by selection and crossing, and the milk produced is all sold locally. The visit paid by the Commission to the latter farm was too brief for us to see its work; but Mr. Chakravarty during our inspection of the Demonstration Farm explained the work of the Dairy Farm and the efforts in progress to increase the milk of the local cattle.

28. The question of the adverse influence which education is stated to have exercised in the past on agriculture, and of the favourable influence which it might exercise in the future obviously deserves the fullest consideration. Rural primary education concerns us only indirectly.[1] It is the education of the middle classes, the *bhadralok* (as well as of the higher classes) with which we have mainly to deal, and on this point the Bengal District Administration Committee have collected important evidence and data. "Men who have any education," said one witness before the Committee,[2] "do not like to cultivate;" and another, that "the one thing a cultivator wants to do is to get some one else to cultivate for him and himself become a tenure holder."

In 1911, out of a total number of 585,000 males over the age of 20, and under that of 55, in Bengal, belonging to the three main educated middle classes, the Brahmans, the Vaidyas, and the Kayasthas, only 160,000 were 'living on cultivation'[3], and it seems probable that these are mainly receivers of produce rents.[4] "Other castes also," say the Committee, "as they acquire education seem more and more inclined to despise agriculture. Large *jotdars*, as they become wealthy, let out as much land as they can afford and take to some trade or profession."

There are here two points to consider: (1) the traditional aversion of the literary castes to agriculture (and other industrial callings); (2) the recent aversion of the lower castes to agriculture, due to 'education.' The University, and the system of which it forms part have, according to some witnesses, accentuated the first aversion and created the second.

"As regards cultivation," says Mr. B. Mukherjee, an occasional Lecturer in Economics at the Diocesan College for Girls, Calcutta, "the too literary education which the University has been giving for the last 50 years and

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The work of the Government farms has been widely criticised as too academic and of no practical assistance to the cultivator. But such criticisms seem unjust and based either on misconception of the work such farms can accomplish or on ignorance of their influence and achievements. The farms would no doubt be still more useful if they were more frequently and systematically visited by neighbouring cultivators. The Report of the Expert Officers of the Bengal Agricultural Department for 1916 (page 21) states that "a few landed gentlemen and cultivators visited the farm during the year."

[1] Chapter XLVII.

[2] See Report, page 165.

[3] *Loc. cit.*, page 166.

[4] *Loc. cit.*, page 175.

more, has produced a sort of 'economic apoplexy,' and educated Indians dislike cultivation so thoroughly that nothing will induce them to take it up."[1]

On the other hand, the People's Association of Khulna[2] say:—

"The vast mass of the people of Bengal are agriculturists by tradition, which has invariably assigned the highest place to this occupation among professions and callings."

But this statement is opposed to the great mass of our evidence on the point. Mr. Mukherjee's statement, though too absolute, is true in the main; and many influential witnesses hold that the University, and the University alone, can remove both the prejudice which it has helped to create, and the prejudice of immemorial times.

"Besides the general attraction which they have for young minds, not in India alone, degrees and other university distinctions are specially needed in this country to overcome the long existing prejudice against industrial and even commercial pursuits, entertained by the higher castes, notwithstanding the relaxation of the caste system, notwithstanding poverty, and notwithstanding the overcrowding of the avenues to employment in the services and the professions."

The passage quoted is from the Calcutta University Committee which reported on degrees in agriculture and other technological subjects in November 1917 and which consisted of Sir Gooroo Dass Banerjee, Dr. (now Sir) Deva Prasad Sarbadhikari, Dr. Brajendranath Seal, Mr. W. C. Wordsworth (now Acting Director of Public Instruction in Bengal), Mr. E. E. Biss and Dr. (now Sir) Nilratan Sircar. Sir Gooroo Dass Banerjee, an unchallengeable witness on points relating to caste, wrote[2]:—

"The caste system, which has done some good, has done this harm that notwithstanding its relaxation at the present day, it has created in the higher castes with all their poverty a prejudice against agricultural, technological, and even commercial, pursuits which is so strong that it can be overcome only if the University takes in hand the training in those subjects, institutes degrees in them, and offers to students the rank of graduates and undergraduates."

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[1] Question 7; see also the answer of Mr. Radhakamal Mukerjee to Question 1.

We have ourselves had clear witness of a few graduates in Bengal taking to agriculture as a means of livelihood. Some of our members discussed this subject with a young graduate, formerly a school master, who is cultivating land profitably on Sir D. Hamilton's estate at Gosaba in the Sunderbans; and Mr. P. K. Bose at Dacca informed us that he knew a graduate who at Midnapore in 3 or 4 years, with very small capital, made an income of Rs. 80 a month by the cultivation of previously untilled land.

[2] Question 6.

29. The answers to Questions 6 and 7 of our questionnaire show how widespread is the view that agriculture should be taught by the University, partly for its own sake, partly to relieve the pressure on other careers.[1] But much of this evidence is not based on a close study and knowledge of local conditions.

We select for more detailed consideration the evidence of Mr. J. N. Gupta, the Collector of Rangpur, to whose energy and capacity the creation of the Rangpur College with its 900 bighas of land is so largely due; the Maharajadhiraja Bahadur of Burdwan, now a member of the Executive Council of Bengal, no less enthusiastic in the cause of education than Mr. Gupta; and Mr. Milligan, the Director of Agriculture for Bengal.

Mr. Gupta is in favour of the establishment of an agricultural college and an agricultural degree; he says[2]:—

"As regards the creation of a new degree in agricultural education and the popularisation of agricultural education, it is obvious that as in the case of industrial education agricultural openings will have to be created, and it must be demonstrated that scientific agriculture will provide a decent living to the middle class young men.

Once this is done there will be no dearth of young men willing to avail themselves of agricultural training. This is however mainly a work for Government and public-spirited zamindars."

Mr. Gupta modifies this last statement to some extent in the following passage:—

"It is also important that the agricultural degree should be exactly on a par with the other degrees and should receive equal recognition. It may be urged that the object of making agricultural education a part of the university course will be frustrated if the people take the degree simply with the object of entering Government service. But as matters stand now in all professional studies like engineering, medicine, etc., a large proportion of the students necessarily consist of those seeking employment either under Government or with private parties. But it is only a few who secure such appointments, and the surplus graduates have now built up a private profession in each of these branches. There is every reason to believe that similar will be the case with agriculture where the field is very much larger. But it is essential that the necessary educational facilities should first be given. The Department of Agriculture is rapidly expanding and Government

[1] Of the 150 witnesses who have given replies to Question 6, over two-thirds have mentioned agriculture as a subject in which the highest training should be given; about one quarter have been silent on the point; and seven only are adverse to the University taking up the subject. The answers are of course not capable of exact classification, but the above figures may be taken as approximately correct.

[2] General Memoranda, page 2.

is gradually associating Indians with the higher branches of the service. It is very desirable that there should be some institution in the Province itself which will fit them for carrying on investigations and for qualifying for these higher appointments. In addition to the Department of Agriculture, which is rapidly expanding, there are various other departments under Government where some knowledge of agriculture will be of distinct advantage to the officers. Some of these may be named, *e.g.*, settlement, court of wards, *Khas Mehals* or circle system, and co-operative credit. In addition to these departments of Government, zamindars are also likely to employ these graduates on their estates. It is also likely that sons of zamindars who are now going to the University in increasing numbers for the sake of general training might like to take the agricultural course instead of the arts course.

The agricultural education to be given in the University must not however be purely theoretical and must fit a man, after a reasonable period of probation, to carry on either practical or scientific agricultural work on his own responsibility. A farm must therefore be attached to an agricultural college where the students will undergo practical training along with their studies. It may perhaps be necessary to make the bestowal of a degree conditional on the completion of a year's practical training on a farm. However carefully devised, a practical training is hardly satisfactory unless the man going through it has an opportunity of doing some responsible work, and this is very difficult to arrange during the college course."

In regard to his own district, Mr. Gupta writes :—

"The soil and climate of Rangpur are suitable for growing all representative crops of Bengal. The district is a purely agricultural one and there is a large class of small zamindars and well-to-do *jotedars* (landed proprietors) who depend on agriculture for their living. They would receive great practical benefit if they had an agricultural education, and most of them could easily afford the cost of a university training if a practical course suitable for them were devised. Even if it be not possible to establish a fully equipped agricultural college at once, it may be quite possible to include a few agricultural subjects in the curricula of the regular science course."

The Maharajadhiraja Bahadur of Burdwan urged on the Commission the desirability of the University undertaking the training in agriculture (as well as of other classes of technology) or at any rate of guiding and helping the theoretical or academic portion of the work.[1] Yet in his oral evidence he said :—

"A graduate in agriculture is not likely to find suitable employment. The zamindars require a different type of manager for their estates. They are not as yet in need of the scientific advice of the agriculturist."[2]

Mr. Milligan, the Director of Agriculture for Bengal, was, if anything, less encouraging than the Maharajadhiraja Bahadur of Burdwan. He said plainly (speaking of Bengal) that "University training in agriculture is at present in the nature of a blind alley,

[1] Question 6.

[2] General Memoranda, page 504.

as the prospects of profitable employment in agriculture are poor and the training is unsuitable for anything else."[1] He thought that the college-trained boy could not compete successfully with the raiyat, owing to the smallness of the holdings, that the educated classes of Bengal did not take to farming as a profession; that a training in scientific agriculture was unnecessary for land agents, though they badly needed training in civil engineering for irrigation and drainage works;[2] and that it was not a good speculation for a boy to undertake the study of agriculture in the hope of obtaining a post in the Department of Agriculture. The present scheme of recruitment for the Department included one agricultural officer—a man of the type turned out by the Agricultural College—for each district in Bengal. This meant that there would be little more than one vacancy a year. If the personnel were increased so as to provide one agricultural officer for each sub-division, the number of vacancies might possibly be increased to four a year; and in addition there were a few farm overseers. But we understand that Mr. Milligan's objections to agricultural training as fitting a man for no other career would not apply in his judgment to a person trained on the scheme which, after consultation with him, we have recommended in Chapter XLVII of this report.

30. It is manifest that the decision in regard to the question of establishing agricultural education of a university character in Bengal is not one to be made lightly. In favour of such establishment, we have the experience of the universities of nearly every other civilised country; the paramount importance of agriculture to the province; the general policy of the Imperial Department of Agriculture; the argument adduced by many witnesses that the University will exert, by the conferment of degrees, a real influence in overcoming the prejudice of the educated classes for manual labour and especially agricultural occupations;[3] the desire

[1] General Memoranda, page 12.

[2] *Cf.* Mr. Birley's evidence, para. 25, above.

[3] The existence of this prejudice, which is not confined to Bengal, may be illustrated by quotation of a question (No. 95) recently asked by Mr. Y. G. Deshpande in the Legislative Council of the Central Provinces:—"Is it a fact that during the first two years course of the Agricultural College at Nagpur the students have to undergo hard manual labour such as cutting of grass, taking filthy manure in baskets on their heads from the store to the farm, grinding corn, etc.?"

to open up new avenues of occupation for educated Bengalis, so as to relieve overcrowded professions; and the general pressure of educated public opinion in Bengal. Against it are the failure, up to the present time, of Sabour to attract students; the small size of the great majority of holdings in Bengal; the present distaste of the educated Bengali for practical work; the difficulty of providing suitable employment for university men requiring relatively high salaries; and the danger of flooding the market with disappointed unemployables.

31. *Forestry.*—The subject of forestry is an important one for Bengal, which includes over 10,000 square miles of forest land, much of which is of great economic value.

Forest experts are employed almost exclusively by Government, although a considerable amount of forest land is in the hands of private owners. The Bengal Government employs forest officers in the Provincial Forest Service which can only be entered through the Imperial Forest College and Research Institute at Dehra Dun, or by promotion from the rank of ranger.

The Dehra Dun Institute provides a two-year Provincial Service course which may be attended by persons nominated by local Governments and, if there are vacancies, by private persons with approved qualifications. There was one Bengali student (out of 19) in the Provincial Service course for 1916-18, none for that of 1917-19 and there is one (out of 20) in the course for 1918-20.[1] The Institute also provides a two years' instruction course for forest rangers. There is also an institute providing instruction for forest rangers at Kurseong. The Public Services Commission have recommended (1) that direct recruitment to the Imperial branch of the Forest Service should be made in India, (2) that, with this object, a course of training up to the highest European standard should be instituted at Dehra Dun, and (3) that candidates for this course should hold the degree of bachelor of science.[2] The Industrial Commission have also recommended extensions at Dehra Dun.[3]

We think that, for the present, advanced training in forestry can be most economically dealt with by the Imperial School at

[1] Information furnished by the principal of the Dehra Dun Institute.

[2] Report of Commission, page 151.

[3] Report, para. 63.

Dehra Dun, which was visited by some of our members; and we hope that a certain number of students, after taking the specialised B. Sc. described later,[1] will proceed for higher training in forestry to that school. But we should not like to exclude the possibility of developing in Bengal at some future time training in, at any rate, some of the special branches of forestry.

32. *Sericulture.*—The question of sericulture is one of importance to Bengal. There are seven central nurseries, of which one, that at Berhampur, which we visited, also has a training class; and there is a special school at Rajshahi with a larger number of students (10 or 11) which we also visited.[2] Students who pass the courses satisfactorily receive a grant of Rs. 250 on condition that they rear silk-worms for three years by the methods taught them at the school and erect new buildings which they have to keep free from infection.

The sericultural farms are engaged primarily in the production of 'seed' cocoons reared from moths free from pebrine and other diseases. They are also attempting to improve the indigenous races of silk-worms by hybridisation with imported breeds; and they train the sons of the actual silk-growers in better and safer methods of work. Independently of the work of these farms Miss Cleghorn is, with the help of large grants from Government, carrying out at Alipore investigations on the inheritance of important characters of silk-worms and the establishment of new races by hybridisation.[3]

We do not anticipate that instruction in sericulture would be attempted by the University on a systematic plan at an early date, although a few graduates who have taken the specialised B. Sc. degree described in Chapter XLVII below, may well devote themselves to investigation in this subject.

33. *Veterinary science.*—Veterinary science ought not strictly to be treated as a department of agriculture; but its importance

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[1] Chapter XLVII.

[2] One of our members (Dr. J. W. Gregory) also visited the farm of Piyasbari in the Malda district, the chief farm for the raising of silk-worm 'seed.'

[3] The Industrial Commission say Indian "sericulture may be regarded as an agricultural occupation similar to bee-keeping or poultry-farming. It is essentially a cottage industry....." They think that the duties of the silk-rearer should be limited to the production of cocoons. (Indian Industrial Commission, 1916-18; section (G) of appendices to Report).

to agriculture in India so far outweighs its importance in other respects (military requirements being left out of consideration), that it is convenient to treat it in this chapter.

There are veterinary colleges at Calcutta, Bombay, Madras, Lahore and Rangoon, staffed by members of the Imperial and Provincial Veterinary Services. The existing veterinary colleges teach up to the standard of the grade of veterinary assistants, so far as the present staffs permit.[1] The majority of the Public Services Commission recommended that classes teaching up to the highest standard of veterinary science should be established in India;[2] but Sir F. G. Sly wrote a dissentient note in which he stated that the Indian demand for veterinary surgeons was minute; that the recruitment to the Civil Veterinary Department averaged about two officers a year; that there was no scope for highly qualified veterinary surgeons as private practitioners, outside the presidency towns and there only to a limited extent; that the proposed college would only attract an extremely small number of students who could be more cheaply provided for by sending some Indian students to British colleges under a scholarship system; and that he was not prepared to recommend the creation of a high grade college in India until a large expansion of the civil veterinary department demanded a considerably larger annual recruitment and until the progress of the country could absorb veterinary surgeons as private practitioners.[3] A committee of the Board of Agriculture reported on the proposals of the Public Services Commission, and on veterinary education generally, to the meeting of the Board at Poona.[4] A copy of their report, which was adopted by the Board, is printed in the volume of appendices to this report.

It will be seen that it raises the question whether the Calcutta college, among others, should be raised to a higher standard, or whether an Imperial Veterinary College should be created.

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[1] Proceedings of the Board of Agriculture in India held at Poona, 1917, page 53.

[2] Report, Annexure II, paras. 7 and 25, pages 79, 85.

[3] *Loc. cit.*, pages 52 and 56, and also Appendix III on Veterinary Education, pages 167-178. Of 63 students who passed out of the Bengal Veterinary College in the years 1912-13 to 1915-16, only 5 were reported to be in private service (Report of Bengal Veterinary College .... for 1916-17, Table I).

[4] Report, page 87.

Mr. K. Howlett, the Principal of the Bombay College,[1] suggests that if it is practicable to raise the standard of the provincial colleges without deterring candidates from presenting themselves for admission, a four years' English course should be started in place of the three years' course, and that the Indian Veterinary colleges should then be affiliated to the Provincial universities in the same way as the Agricultural College, Poona, is affiliated to the Bombay University. The Bengal Veterinary College, founded in 1893 and raised in 1899 to the status of a college, is on the Belgachia-Dum-Dum Road (about five miles from Government House), and consists of a large building in which are three lecture-rooms, a museum, a reading-room, a pharmacy class-room, a room for the lecturers, a photographic room, and a dispensary. A veterinary hospital is attached to the college. There are two hostels attached to the college, which afford sufficient accommodation for 188 boarders. There are also a research laboratory and a library. The number of students in 1917-18 was 157. The entry for 1918-19 was 58, and the total number attending during this session will be 171.[2]

The question of the future development of the Veterinary College and its possible connexion with the University of Calcutta raised in the foregoing paragraphs come within our reference; but the information before us does not enable us to express a definite opinion in regard to it. It is clear that at some future time the Bengal Veterinary College might appropriately be made a centre for higher veterinary studies and research. But we must leave it to other bodies to determine what action should be taken in regard to it.

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[1] *Loc. cit.*, page 171.

[2] Information furnished by the principal of the college.

CHAPTER XXVI.

TRAINING IN TECHNOLOGY (OTHER THAN ENGINEERING, MINING, ARCHITECTURE AND AGRICULTURE) AND IN COMMERCE.[1]

I.—Historical retrospect.

1. So long ago as 1886 the Government of India issued a resolution to emphasise the 'little progress of a substantial character' which had been achieved in the matter of technical education in India. In the same year the present Lord MacDonnell wrote a memorandum on technical education in India in which we read that "industrial schools in Bengal were mere excrescences on the educational system with neither plan nor object." In 1888 the Government of India issued yet another resolution which suggested among other things that an industrial survey should be held in each province. The industrial survey of Bengal was made in 1890 by Mr. E. W. Collin of the Civil Service. Mr. Collin's report was reviewed in 1891 by the Government of Sir Charles Elliott, then the Lieutenant-Governor of Bengal. The purport of this review was that the advancement of technical education was not a matter which could be pressed regardless of the demand for it, or of economy. It was to the maintenance of the Sibpur College and the Calcutta School of Art in the highest scale of efficiency that the Lieutenant-Governor looked for the promotion of technical education. In the Quinquennial Review of the Progress of Education in India from 1893 to 1897 Mr. J. S. Cotton could find "no appearance of a system of technical education anywhere" in India, except, perhaps, in Madras.[2] In the next quinquennial review (1898-1902) Mr. Nathan was constrained to admit that the endeavours made to provide, through State agency or under State control, a system of technical education had met with little success.[3]

[1] Engineering, Mining and Agriculture are dealt with separately in Chapters XXIV and XLVI, and in Chapters XXV and XLVII respectively, but certain incidental references to these subjects appear in the present chapter.

[2] Progress of Education in India, 1892-93—1896-97. Third Quinquennial Review by J. S. Cotton (London, 1898), para. 176.

[3] Progress of Education in India, 1897-98—1901-02. Fourth Quinquennial Review by R. Nathan (Calcutta, 1904). para. 864.

2. The year 1901 saw the inauguration of a fresh cycle of inquiry, discussion and investigation. Sir Edward Buck's inquiry into practical and technical education, the resolution on technical education arrived at by the Simla educational conference of 1901 and the instructions of the Government of India thereon, the inquiries and recommendations of the Committee on Industrial Schools in India and the resolution of the Government of India thereon, all followed each other in close succession from 1901 to 1904. This literature has been described as "voluminous, suggestive but comparatively infructuous." Meanwhile the Director of Public Instruction, Bengal (the late Sir Alexander Pedler), had, under instructions from the local Government, worked out a scheme for the establishment of ten craft schools in the Bengal Province, as it was then constituted, including a weaving school at Serampore. This scheme and the suggestions circulated by the Government of India as the result of the Simla conference of 1901 were placed in 1904 by the Government of Bengal before a committee comprised of officials and representatives of the public; the result of the deliberations of this committee was the opening in 1907 of the Serampore Weaving Institute.[1]

3. In 1905 the Association for the Advancement of the Scientific and Industrial Education of Indians submitted to the Government of Bengal a proposal to establish a technical college on the lines of the Victoria Jubilee Technical Institute, Bombay. It was suggested that the college should provide for mechanical engineering, electrical engineering, spinning and weaving, sheet metal and enamel work, industrial chemistry, dyeing and paints, ceramics, silk, mining and metallurgy. This proposal was referred to another committee of officials and representatives of the public over which Mr. C. A. Oldham, who was then Director of Agriculture in Bengal, presided. The only result was the opening in 1911 at the Sibpur College of classes in dyeing. These classes proved a complete failure and were closed in 1916.[2]

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[1] Resolution by the Government of Bengal, General Department, no. 54, dated the 2nd February 1904.

[2] Progress of Education in Bengal, 1912-13 to 1916-17. Fifth Quinquennial Review by W. W. Hornell, (Calcutta, 1918), para. 360 (*b*).

II.—Existing provision for technological and commercial training in the Bengal Presidency.

(*A*) *The Serampore Weaving Institute.*

4. The object of this institute, as described in the last quinquennial review of education in Bengal, is to provide two distinct grades of instruction in the best and latest methods of hand-loom weaving, (*a*) for young men possessing a fair degree of education, desiring to qualify as teachers, managers of hand-weaving factories and general organisers of the industry[1]; and (*b*) for actual hand-loom weavers and their sons ; for these students no educational standard for admission has been prescribed but only weavers by caste or profession are admitted. The institute also serves as a base from which instruction is given to weavers through district schools organised at different centres of the industry. There are five such schools, at Bankura, Malda, Pabna, Tangail (Mymensingh district) and Cox's Bazar, respectively ; and each gives a practical course extending over from three to six months. The curriculum of the higher classes of the Serampore Institute is as follows :—

First year—Fabric structure, design and analysis of cloth, weaving mechanism, yarn preparation, spinning, sketching of textile machinery, freehand, model and engineering drawing, principles of colour and mensuration ; Second year—The same except that the sketching of textile machinery, freehand, model and engineering drawing, principles of colour and mensuration are dropped, and historic ornament, construction of works, engineering drawing and mechanics are taken.

The work of these classes is hampered by the fact that the students when they join know nothing of drawing. The principal, Mr. E. Hoogewerf, was trained at the Manchester School of Technology and he aims at bringing the students of the higher classes, who are prepared for the City and Guilds examinations, up to the Manchester standard. The examination results are generally satisfactory. The principal is not, however, satisfied with the knowledge which the students acquire in the theory and practice of weaving and he is anxious that the period of instruction for the higher class should be extended to three years. The students of the artisan classes of the institute as well as of the district schools are taught design and analysis of cloth, and free-hand drawing. The artisans are

[1] The matriculation examination of the Calcutta University has been fixed as the lowest standard of admission.

taught in Bengali, and as much time as possible is devoted to drawing and pattern-designing with a view to enabling them to improve their patterns and to prepare original designs. In the case of the artisans also the period of instruction has been found to be inadequate.

5. On the 3rd March 1917 there were 78 students attending the two classes in the Serampore Institute and 56 artisans on the rolls of the five district schools referred to above. The quinquennial review states that the institute has been working ever since its opening at a great disadvantage owing to the lack of permanent and adequate buildings of its own, that a number of students have been refused admission, and that the present enrolment could be doubled without difficulty. In the year 1916-17 the Serampore Institute cost the public revenues Rs. 30,167,- and the outlying schools cost Rs. 5,835.

6. The war has made it difficult for ex-students of the higher classes of the Serampore Institute to find lucrative employment. Most of the business houses have had to reduce their establishments considerably and many of the capitalists who were enterprising enough to open small weaving factories have closed down owing to the uncertainty of the times. Out of 61 students who completed their course of training during the period 1912 to 1917 fifty-one succeeded in obtaining employment on salaries varying from Rs. 20 to Rs. 200 a month. The Secretary of State for India recently sanctioned a scheme of advances to successful ex-students, both of the higher and of the artisan classes. The whole question of developing textile instruction is now under the consideration of the Government of Bengal. As we shall see later, a textile department was included in the scheme for a technological institute in Calcutta.

7. Mr. Hoogewerf has been pleading for some time that the Government of Bengal should make a real effort to organise the hand-weaving industry of the Bengal Presidency. He recently reported to Government that Bengal was believed to have a population of some one million two hundred thousand adult weavers, but that this figure was probably considerably below the actual number, seeing that many cultivators who supplement their earnings by weaving were returned at the last census as agriculturists. He pointed out that the Serampore and the five district

schools, being capable at the very utmost of instructing 200 students, cannot do very much in face of these numbers.[1]

(B) The Bengal schools of art.

8. The policy of the Government School of Art, Calcutta, was recently described by Mr. Percy Brown, its principal, as follows:—

"The object of the school is to guide, direct and encourage 'the special artistic tendencies of the people.' Its work is to restrain, control and instruct the art workman in the preparation of his designs and to develope his technical skill. Its aim is to provide a wholesome art education for all classes of people and to instil into the minds of young India the good there is in the country's art. Not the least important of the school's work therefore consists in a resuscitation of the indigenous æsthetic sense."

The school is organised in five departments:—(1) the elementary department, (2) the industrial department, (3) the draftsman's department, (4) the teachers' department, and (5) the fine art department. The complete course extends over five years. The students of the school have access to the Indian Museum which is adjacent to the school and contains what is probably the finest collection of Indian art in the world. For the benefit of those students who desire to make finished studies of any museum example, a system of loans has been instituted.

9. On the 31st March 1917 there were 282 students on the rolls of the school; of these two were Europeans, three were Indian Christians, 86 were Brahmins, 85 were Kayasthas, 14 were Vaidyas, 77 were Hindus not belonging to either of these castes, 14 were Musalmans and one was a Buddhist. The total cost of the school during 1916-17 was Rs. 41,173.

10. According to the official returns there are four other schools of art in the Bengal Presidency and on the 31st March 1917 there were 385 pupils in them. During 1916-17 the cost of these schools was Rs. 20,077, towards which amount public funds contributed Rs. 1,650.[2]

(C) The Calcutta School of Commerce.

11. There is a Government Commercial Institute in Calcutta, which annually costs the public revenues about Rs. 16,000. This institution grew out of a commercial class which was started at

[1] Progress of Education in Bengal, 1912-13 to 1916-17. Fifth Quinquennial Review by W. W. Hornell (Calcutta, 1918), paras. 410-423.

[2] Progress of Education in Bengal, 1912-13 to 1916-17. Fifth Quinquennial Review by W. W. Hornell (Calcutta, 1918), paras. 395-397.

the Presidency College in 1903, and is now administered, under the Director of Public Instruction, by the Government Commercial Institute Board, on which the Calcutta Chamber of Commerce and the Bengal National Chamber of Commerce are represented. It provides whole-time instruction in day classes for students who join at something like the secondary school-leaving stage and are put through a curriculum which extends over two years and includes as compulsory subjects English with special reference to commercial correspondence, letter-drafting and précis writing, arithmetic, including commercial and mental arithmetic, and an Indian vernacular, with shorthand, typewriting and book-keeping as optional subjects.

12. In 1916-17 there were 83 students in the day-classes. In 1913 Mr. Lee, the President of the Government Commercial Institute Board, prevailed upon the Bengal Chamber of Commerce to circulate a letter to its members asking them to state the number of vacancies in their respective offices and to make it a rule to take passed students of the Institute, wherever possible. The principal of the institute, Mr. Girendra Kumar Sen, recently reported that the number of ex-students of the institute in Calcutta mercantile offices exceeded 1,500 but that of these some 400 only hold the certificate of the institute. One of the difficulties is that a considerable proportion of the day-class students do not remain at the institute for the whole course; but it is reported that even unsuccessful candidates at the final examination, especially those who have passed in shorthand and typewriting, are in demand. The salaries now being paid to ex-students of the institute range from Rs. 60 to Rs. 200 a month.

13. The institute also provides instruction in evening classes in mercantile law, banking and currency, insurance and annuities, book-keeping, shorthand and typewriting, political economy and accountancy. There is a certain demand, on the part of evening class students, for typewriting, shorthand and book-keeping but very little for other subjects. Arrangements used to be made for evening classes in modern English and political economy but no lecturers have been appointed in these subjects for the last two years, because no students have been forthcoming. In view of the above facts it is interesting to note that the framers of the Calcutta Technological Institute scheme advocated the develop-

ment of these evening classes in the commercial department of the proposed institute.[1]

(D) The Palit and Rash Behary Ghose Trusts.

14. The Palit and Rash Behary Ghose Trusts have been described elsewhere,[2] and a passing reference to them will suffice for this chapter.

15. There are two Palit Trusts. The capital of the first amounts to Rs. 4,80,400 and the capital of the second Rs. 3,85,750 (including one *lakh* for scholarships held out of India). The annual income of the first trust is Rs. 24,000 and that of the second Rs. 93,000. The trusts comprise in addition valuable immoveable properties bringing up their total value to 15 *lakhs*.

16. The capital of the Rash Behary Ghose Trust is 10 *lakhs* and the annual income is Rs. 40,000. In his letter of the 8th August 1913, in which Sir Rash Behary Ghose announced to the Vice-Chancellor his decision to create the trust, he wrote :—

"For some time past it has been my desire to place at the disposal of my university a substantial sum for the promotion of scientific and technical education and for the cultivation and advancement of science, pure and applied, amongst my countrymen by or through an indigenous agency."

The income of the endowment is at present applied to the maintenance of four professorships, in applied mathematics, chemistry, physics and botany, and the provision of eight research scholarships of Rs. 75 a month each. Two of the professors are working at the University College of Science ; the other two are, at present, interned in Germany, to which country they had proceeded for purposes of study before the war. When he founded these professorships, Sir Rash Behary Ghose stated in the letter, from which we have quoted above, that it was to be the duty of each professor "to carry on original research with a view to extend the bounds of knowledge and to improve by his researches the arts, industries and manufactures of this country."[3]

III.—Technical scholarships tenable outside India.

17. In 1904 the Government of India inaugurated a system of State technical scholarships. These scholarships are worth about £150 a year each and are ordinarily tenable for two years in Europe

[1] Progress of Education in Bengal, 1912-13 to 1916-17. Fifth Quinquennial Review by W. W. Hornell (Calcutta, 1918), paras. 399-400.

[2] See Chapter XV.

[3] University of Calcutta, Calendar for 1917, Part I, page 104.

or America. Two of these scholarships have been assigned to the Presidency of Bengal. The subject of study is selected annually by the local Government concerned, after consulting such bodies as the Chambers of Commerce, and leading industrial firms and selected individuals. When the subject is settled, the local Government invites applications, and according to the procedure which has been recently superseded it used to submit nominations to the Government of India. The present procedure is that the local Government awards the scholarship itself. We find that during the last five years scholarships have been awarded to Bengal students for mechanical engineering, electrical engineering, architecture and motor engineering.

18. This State technical scholarship system has been somewhat severely criticised and in 1912 the Secretary of State for India appointed a committee to review its working. The committee was presided over by Sir Theodore Morison and as a result of its recommendations the rules regulating the award and tenure of these scholarships were changed. The view has been expressed that, in the industrial conditions which have hitherto prevailed in India, the technical scholarships held out of India have been a failure rather than a success. The opportunities which awaited the scholarship-holders on their return to India from the West had not enabled them to put to the best advantage the knowledge and practical experience which they had gained abroad. But all ex-scholarship-holders had obtained employment—in some cases in Native States—though not always of the kind which was contemplated when the system of scholarship was instituted. The system of State technical scholarships is further discussed in Chapter XLVIII. Certain private associations, notably the Association for the Scientific and Industrial Education of Indians, provide scholarships which are tenable in Great Britain, the United States of America and Japan.

IV.—Future provision for technological instruction in Bengal: its difficulties; its necessity; schemes under consideration; evidence in regard to these schemes and to the subject generally.

(A) Difficulties due to caste.

19. In 1908 Mr. J. G. Cumming, (now a member of the Bengal Executive Council), was instructed by the Government of Bengal

to review the industrial position and prospects of Bengal as it was then constituted, with special reference to the industrial survey prepared by Mr. Collin. It was not in Mr. Cumming's view so much the fault of the would-be Bengal industrialists as of their tradition and environment that "they lacked initiative, co-operation of capital, business capacity and organisation." The main feature of the position, as he found it, was that the desire to engage in industrial enterprise arose not among the Indian commercial classes—for commerce paid them better, but among the professional and land holding classes, persons in whom the commercial instinct had not been fully developed, but who were feeling the struggle for existence.[1]

20. The question of traditions and environment brings us face to face with the Hindu caste system and all that it involves. Sir Gooroo Dass Banerjee admits that, in the matter of caste prejudice against certain occupations Indian traditions differentiate India's needs from those of Great Britain and other European countries.

"The caste system", writes Sir Gooroo Dass, "which has done some good, has done this harm that notwithstanding its relaxation at the present day, it has created in the higher castes, with all their poverty, a prejudice against agricultural, technological and even commercial pursuits."[2]

Mr. Sasi Sekhar Banerjee, the Officiating Principal of the Krisnath College, Berhampur, says that the Indian people, especially those of the upper classes, have caste prejudices and will not take to those industries and trades which were not sanctioned for them. His view is that these prejudices are disappearing, and he maintains that what the Indian people now lack is initiative and proper guidance.[3]

21. The Maharajadhiraja Bahadur of Burdwan writes that the peculiar conservatism of the Indians (particularly the Hindus), their injunctions against sea-voyages, and their rigid caste system are not at all favourable to commerce and manufacture.[2] Mr. Govinda Chandra Bhowal states that the traditions of India based upon the caste system make it difficult to institute a

[1] Review of the Industrial Position and Prospects in Bengal in 1908 with special reference to the industrial survey of 1890—Part II of Special Report, page 45, Calcutta, 1908.

[2] Question 6.

[3] Question 6; see also Chapters XXIV and XXV.

general system of training based on considerations of personal capacity and economic demands.

"Under the caste system," he writes, "different castes have different callings allotted to them. It is difficult to induce the people of the country to break through these traditions and barriers. Castes except weavers will not take to weaving. No Hindus, except a particular class, will take to leather-making."[1]

22. Dr. David Thomson of the Cotton College, Gauhati, and the Rev. Garfield Williams are both emphatic in their insistence that the caste system blocks the development of the country.

"Assam," writes Dr. Thomson, "is still to a very great extent virgin country and she needs, or ought to need, pre-eminently industrial pioneers in every direction—in agriculture, forestry, engineering and mining, in all their branches.....Outside the professions proper she needs, or ought to need, an army of skilled artisans. The results of the present system of education, or rather I should say of the caste restrictions, which bind hand and foot those who benefit by the present system of education, is a super-abundance of lawyers, clerks and untrained, and for their profession badly educated, teachers.....The university is in no way to blame, nor is the Government, for this state of things. Our students get what they ask for. If the demand is unhealthy and if our students find themselves at the close of their college careers without a market for their educational wares, the fount and source of all this evil is, if we will only go far enough back, the blighting influence of caste. Assam needs nothing short of a social revolution for her industrial and educational regeneration. In this respect she apparently differs but little from the rest of India. Education will in time work this revolution. Already the signs of change are manifest."[1]

23. Mr. Garfield Williams asserts—

"that a man of 'highly trained intelligence' should take his part in manufacturing and commercial activities is a conception more foreign to the Indian mind than to that of any other type with which I am acquainted. One recalls that in pre-revolutionary France the old-fashioned rules and regulations which, for instance, 'forbade a man to change over from one trade to another without a long and costly legal process' were felt by the people to be in need of reform. Here in India in the twentieth century, a social system built up upon a religious foundation has such a hold over the people that to the vast mass of them it will never even occur that they should for the sake of greater prosperity change their traditional occupation."[2]

24. Mr. Sudhansukumar Banerjee, one of the lecturers of Calcutta University, pleads that the industrial organisation of this country should be built up on the basis of the caste system :—

"The division of labour which formed the basis of the caste system existing in India has peculiarly adapted particular classes of people for particular kinds of work. This should be kept in mind in building up new

[1] Question 6; see also Chapters XXIV and XXV.

[2] Question 2.

institutions throughout the country. For example, model agricultural institutions should be opened, not in towns or in the vicinity of towns, but in important villages.....Ship-building institutions should be opened in places like Chittagong and other sea-coast places..... Commercial and industrial institutions should be opened in places like Khagra, Dacca, Berhampur, Cuttack, etc., which are well known for the industrial enterprise of their inhabitants."[1]

(B) The bread problem.

25. But all our witnesses agree in emphasising the economic, social, and political necessity for providing an outlet into industry and commerce for the middle classes of Bengal; and there is also equal unanimity in the condemnation of the existing educational system as inadequate to the demands of to-day.

"The great problem of the hour", writes Mr. P. N. Dutt, one of the professors of the University Law College, Calcutta, "is the bread problem. It is daily becoming more difficult for our university men to earn a decent living. India, so far as her natural resources are concerned, can furnish bread and employment for her university men to a much greater extent than she does at present. But we want the right type of men, more capital and more organisation."[1]

Mr. Dutt goes on to tell of a relative of his, whom he put into "the Electrical Department" some seven or eight years ago on Rs. 15 a month "simply because his education was so defective that he was not good enough for any post of equal pay in any other department." This young man is now drawing Rs. 75 a month and is the envy of many M.A.'s; he was saved, as Mr. Dutt laconically remarks, from the fate of being a clerk by 'his poor education.'

26. Justice Sir Ali Imam, now a member of the Executive Council of Bihar and Orissa, observes that "industries to be successfully carried on at the present day require a high degree of training." He complains that "the textile industry which was at one time the pride and glory of India and for which the country provided such resources both in the materials and by the special aptitude of the people, has died out under the stress of modern competition."

"Industrial commissions", he writes, "that the Governments appoint from time to time only skim the surface, and no attempt is made to organise our own men to take advantage of the resources of our country. All this could be done, and is being done, in countries where the object of education is not merely to supply more adroit assistants to governors appointed from abroad, but to develope the resources of the country..... What is needed is

[1] Question 6.

a more intelligent and patriotic turn given to the ideals of education, and all the rest will follow."[1]

27. Mr. Justice T. V. Seshagiri Iyer of the Madras High Court contends that the work of Great Britain in India should primarily be "to wean Indian youths from their traditions in regard to occupations, so that their energy may be spent in developing the resources of the country."[1] Mr. Abdul Jalil of the Meerut College admits that in India private enterprise is entirely lacking, but he also accuses Government of a lack of interest in the industrial development of the country.[1] Mr. Becharam Lahiri, a pleader at Krishnagar and Secretary to the Nadia District Association, asserts that the "*servitude* of many centuries" has eaten into the "very vitals" of the peoples of India and that what stands in the way of their development is "their feeling of *abject bondage*."[1]

28. Mr. Atul Chandra Sen of the Ripon College says that the inhabitants of India are so poor that "many of them cannot even procure two meals a day."

"The condition of the middle classes", he writes, "is anything but satisfactory. Many young men after obtaining degrees from the University are compelled to join the Bar in the absence of any other profitable employment. The result is that the Bar is overcrowded and those who joined it in the hope of bettering their circumstances soon meet with bitter disappointment. A great deal of the discontent which is now prevalent among the educated classes is admittedly due to the fact that their education does not enable them to obtain a decent livelihood."[1]

29. Mr. H. Sharp summarises certain aspects of the general economic position in Bengal as follows:—

"An outstanding feature about Bengal is her economic condition: out of 45½ million inhabitants 35⅓ millions are employed in agriculture. Industries have not largely developed save around Calcutta where they are for the most part in the hands of Europeans. The agricultural class over a large portion of the country is in a flourishing condition. The development of the jute trade has brought them considerable wealth. The standard of living has risen. The price of commodities and of labour has increased.

The avenues of employment for the middle class are very few, mainly the learned professions. It was the opinion of the Bengal District Administration Committee that the educational product, be its quality what it may, had not so far out-run its market. The class of occupation, however, was mainly clerical and to a very small extent technical or industrial, while members of this class have been hard hit by the rise of prices and the standard of living, the initial pay open to a very large number of them being no larger than the average pay now earned by the lowest grade of agricultural labourer.

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[1] Question 6.

The same committee has assured us that the dislike for cultivation on the part of the better castes is unequalled in any province in India and that there is no demand for ready made captains of industry. Capital is shy. *Swadeshi* enterprise split on the rock of lack of business knowledge. The avenue of employment is restricted and this dictates the avenue of education. Nearly 1 per cent. of the total population is found in secondary schools—a percentage to which the female half of the population contributes practically nothing. Of the male population, 1·7 per cent. is found in secondary schools and 0·8 per cent. in the secondary stages of those schools. Colleges (mainly arts colleges) contain 0·5 per cent. of the total population and nearly 1 per cent. of the male population. This, in a country where seven-ninths of the population are engaged in agriculture, is a significant fact. The college figures are especially remarkable, when compared with other and more advanced countries and the percentages computed by Paulsen and Badley. Employment being largely confined to Government and other clerical service and the learned professions, all pursue the road which leads thither. The education obtainable is inexpensive. The successful immediately secure prizes which, in proportion to the outlay, would be undreamed of in Europe. The mediocre and the failures hardly obtain a living wage. All, we are told, can get employment. But it has been computed that between 10,000 and 20,000 boys annually leave the secondary schools without appearing for matriculation. All this argues an abnormal condition of things. In other countries these youths would be diverted into institutions leading to other walks in life. In Bengal, apprenticeship is disliked. The educated youth wishes to commence at the higher rungs of industrial employment. Even humble families now desire to have a son in Government employ. The degree or even the hall-mark of matriculation exercises a peculiar glamour.

The obvious remedy is the development of industries."[1]

30. The analysis of Mr. J. R. Cunningham, the Director of Public Instruction, Assam, takes into account factors which have not been examined by any other of our witnesses.

" The market of employment (he writes) is undoubtedly developing as the wealth of the country increases, but the increased supply does not keep pace with the demand. I have not before me statistics which would enable me to express the measure of this truth. But that it is a truth will be freely admitted. At present in a country in which wide discrepancies of fortune are much less manifest than in other countries which are regarded as economically blessed, such discrepancies would seem to be most marked amongst the *bhadralok*, some of whom live in affluence, but a large proportion in conditions which, considering their standards and requirements, can only be regarded as extreme poverty. It is by the *bhadralok* that the pinch of poverty is most severely felt and it is from them, in a combination of economic discontent and political idealism, that the agitation springs which purifies itself into progress. Progress so backed and so inspired is naturally a progress along lines congenial to the temperament and qualities of the class from which it springs. This class is by its traditions dissociated from industrial enterprise, and socially has tended, as a whole, to resist reorganisation or progress in defending its

[1] Question 6.

privileges and its prestige against the encroachments of the lower classes. It is natural, therefore, that such progress as has been achieved, or is immediately in view, is disproportioned in its various branches—politically it sets itself a hope of rapid accomplishment on democratic lines—socially and economically, it moves slowly and reluctantly to the establishment of such conditions as might at once satisfy its own requirements and safely serve for the foundation of democratic institutions. It may be said that this has been adequately realised on the economic side at least—that for half a century the literate have called out for technical education with a view to industrial advance. But the cry for technical institutions has been unsupported by useful action. It has in reality been a cry for industries and in its interpretation a cry for employment, the opportunities for employment of the old kind which a busy market would create. The spirit of commercial or industrial enterprise has been wanting, or, where it has been present, has manifested itself mainly in failure. There are many reasons to account for this—in part, I imagine, the tradition of the classes concerned; in part, probably, the system of early marriages and other aspects of the Hindu social organisation; no eager spirit of enterprise can be expected on the part of those who have early in life given hostages to fortune. On the other hand it may be said that there is want of encouragement and opportunity, and that the State has not moved as it should have done in this matter. Be this as it may, the fact remains that these classes call out for employment, that in the absence of other avenues they march along the road of the middle school and high school and press in a very mingled throng through the gates of the University. This is a state of things which will not correct itself in a day, and which must be taken into reckoning in any question of educational reform."[1]

(*C*) *The Calcutta University commercial scheme; criticisms of the Calcutta School of Commerce and evidence on proposals for commercial education.*

31. The Calcutta University recently decided, on the advice of a special university committee, to ask Government sanction for the institution of a commercial course, leading to (1) a diploma or licence, and (ii) a degree.

The general plan of the proposed scheme is as follows:—

"Students will begin the course as soon as they have matriculated and the course for the first two years—the intermediate course as it is called—is to comprise—(1) English—(*a*) conversation, (*b*) letter writing and essay writing, (*c*) simple texts, (2) elementary economics, (3) commercial geography, (4) mathematics (commercial arithmetic), (5) one of the following, *viz.*, German, French, Japanese, Chinese, physics, chemistry, botany, geology, (6) Hindustani conversation. At this point there will be an examination. For the first six months of the third year course all the students will take—(1) English, (2) general and Indian economics, (3) accountancy, (4) elementary statistics, (5) shorthand and typewriting. The candidates for the diploma or licence will then be sent to commercial offices for six months. The candidates for the degree will continue their studies, adding to the third year curriculum

[1] General Memoranda, page 242.

a second language and the economic and political history of England and India after 1750, while those who are going to study statistics during their fourth year will be required to take a higher course of mathematics. During the fourth and fifth years of the course the curriculum is to be definitely directed towards one of the following careers :—that of a merchant, an actuary, an auditor, a banker or an administrator. During their fourth year all students will be required to take—(1) accountancy, business methods and correspondence ; (2) banking and currency, (3) the mechanism of exchange, including market and stock exchange, (4) transport, (5) public administration, (6) a foreign language, while students of insurance and actuarial science must take statistics. During their fifth year all students are to study commercial law and public finance (including the question of tariffs) ; in addition, the prospective merchant is to take the organisation of business in grain, jute, cotton, tea, hides, coal and any other branch which may be added later, and the study of railways and shipping ; the prospective actuary is to take banking and audit and insurance and actuarial science ; the prospective auditor is to take banking and audit and accountancy and auditing, the prospective banker is to study railways and shipping and banking and audit ; the prospective administrator is to study banking and audit and local government. Before appearing for the degree the student will be required to have spent 12 months in an appropriate office, and to have done, in addition, 6 months' practical work in connexion with the branch of commerce in which he proposes to make his career."

32. In the matter of this practical training the committee which advised the University recognised the difficulty of securing admission of students to business houses, but they hoped that a few such houses might co-operate with the university and provide the necessary facilities. We put this point to the representatives of the Bengal Chamber of Commerce.[1] Both Mr. W. E. Crum and Mr. Alastair Cameron considerd it very unlikely that firms would give facilities for the practical training of candidates for the university degree in commerce. Such a practice would in their opinion be very inconvenient to the offices. Both the witnesses held that if the University wanted to award a degree in commerce, it should not make the award partly dependent on satisfactory work with a commercial firm. They thought that it was not possible to learn much about business in a year or 18 months and that, apart from its manifold inconveniences, such an arrangement would place the head of a firm in a difficult position.[2]

33. The committee recommended that the Calcutta University should establish a commercial college near the university buildings.

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[1] See also paragraph 38 of this Chapter *infra*.

[2] General Memoranda, page 25.

It was estimated that this scheme might involve an initial capital expenditure of about Rs. 1,50,000 and an annual recurring expenditure of Rs. 40,000. The proposal to initiate a commercial course has been submitted by the University to the Government of India but that Government has withheld its orders, pending the receipt of the report of this Commission. The University's recent proposals with regard to courses in agriculture, dyeing, tanning and technological chemistry are in the same position.[1]

34. The comparative failure of the Government Commercial Institute to attract students, especially evening-class students, has not elicited much comment from our correspondents. Mr. P. Basu,[2] Professor of Economics at the Holkar College, Indore, classes all Government technical institutions together and disposes of them in a sweeping generalisation. "Those departments which are conducted by the Government, agricultural institutes, commercial institutes, etc., have signally failed so far to give any beneficial results." Mr. K. G. Naik, an assistant professor in the Calcutta University College of Science, holds up to scorn "the feeble attempts made by Government to create an interest in agriculture, commerce, etc., by establishing small institutions in some places in Bengal." He condemns the expenditure on these institutions as "very lavish" and refers to the popular indignation at public money being squandered on "fattening a few people with little good result to national development." He then proceeds to suggest that Government should establish a technological institute on the lines of the Manchester School of Technology or the Massachusetts Institute of Technology at Boston, U. S. A., and hints that the public might contribute, but only on condition that Government gave a guarantee that it would not "interfere and meddle with the work of the Technological Institute." "The public is losing faith in the Government manning of such institutes."[3]

35. The more general view is that the Government Commercial Institute has partially failed because its courses of study do not lead up to university degrees. This, as we shall see later, is the view taken with regard to the general problem of technical education by a considerable and important section of our correspondents.

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[1] See Section IV (*E*) of this Chapter, para. 41, *infra*.

[2] Question 6.

[3] Question 7.

The recent committee, which was appointed by the Senate to consider the feasibility of the University of Calcutta taking steps to develope the teaching of the higher branches of agricultural, technological and commercial studies, refer in their report to the Government Commercial Institute and private institutions[1] both in and outside Calcutta, as all doing useful work but not having proved attractive to students. "That may be," the committee's report continues, "because these institutions are unconnected with the university, and cannot confer any degrees or other university distinctions." The committee add as a general proposition that "besides the general attraction which they have for young minds not in India alone, degrees and other university distinctions are specially needed in this country to overcome the long-existing prejudice against industrial and commercial pursuits, entertained by the higher castes, notwithstanding the relaxation of the caste system, notwithstanding poverty, and notwithstanding the overcrowding of the avenues to employment in the services and professions."

36. This view that commercial training must, as it were, be provided with the bait of a university degree or diploma is not without its critics. When Mr. C. J. Hamilton, Minto Professor of Economics in the University of Calcutta, appeared before us in Calcutta, we referred to the general opinion that college education and to some degree school education should be adapted to the training of boys who look forward to commercial careers and asked him whether there was likely to be in a short time in India any great increase of opportunities for commercial employment for young men of the ability and standing now found in the colleges and university classes. His reply was :—

"This is a big question and it is rather difficult to answer. I think that a number of the abler members of the community are ready to enter into commercial employment but whether the number is really large I do not know. When I came back from Japan, I had half a dozen letters from parents saying that they were ready to advance a certain amount of capital and asking me to suggest commercial or industrial openings that their sons could take up. I saw both the parents and the sons and I found that in each case there

[1] According to the official returns there were on the 31st March 1917 fifteen such schools with 603 pupils. The cost of these institutions during 1916-17 was Rs. 24,791 towards which Government contributed Rs. 7,681. (*cf.* Progress of Education in Bengal, 1912-13 to 1916-17. Fifth Quinquennial Review by W. W. Hornell (Calcutta, 1918), para. 409.

was a complete failure to appreciate what such a course implied. They had no commercial experience themselves. They wanted to start with Rs. 10,000 in a new business and hoped in the course of a year or two to make a reasonable success. They thought that they might open a shop or start manufacture or might put down a large premium to some established merchants and thus be assured of a definite income and position in the course of a year or two. I think that such people have a mistaken idea as to what is involved in commercial or industrial success. This error is very widespread among the parents of Bengal. Then again I think that there is already an increasing sphere for the able Indian to take his part in commercial life, if he can prove that he has the requisite qualities which the heads of departments of business require. But one of the difficulties I find is this, that attaching to every university degree and perhaps to some extent to every grade of position or society there is a kind of idea of the salary which is appropriate, even at starting. Thus you will constantly find that a student will refuse appointments below a certain pay, say, Rs. 50, on the ground that they are incompatible with his social or educational status. I take it that it is almost a condition of things, as they are at present, that even an able man looking for permanent occupation in commerce must be content to start at the very beginning, even on very low pay, and that it is one of the real difficulties."

37. Mr. P. W. Newson, one of the partners of Messrs. Jardine, Skinner and Company, Calcutta, told us that the present situation of Indian commerce was more satisfactory than it had ever been in the past, and that owing to the war and its effect upon European recruitment it was probable that India would have to rely more on Indian agency, in the higher grades of employment. He told us, however, that the prospects of those who received higher education in commerce were not promising. Mr. Newson is not a great believer in commercial education and he is very doubtful whether a university education is of great value in business. His view is that business can only be learnt effectively in the school of experience and his firm in making an appointment would not consider a university training in commerce any recommendation. He admitted, however, that a good education probably paid in the long run.[1]

38. Mr. W. E. Crum,[2] a partner in Messrs. Graham and Company, Calcutta, and Mr. Alastair Cameron,[2] a partner in Messrs. Mackinnon, Mackenzie and Company, Calcutta, came before the Commission as representatives of the Bengal Chamber of Commerce. Mr. Cameron told us that some Bengali assistants in his firm were receiving as much as Rs. 1,000 a month, but both he and Mr. Crum stated that

[1] General Memoranda, page 25.

[2] *Ibid.*, page 24.

Bengalis with university qualifications seldom applied for posts in commercial offices. "They object to doing the drudgery work, but it is essential for all to start at the bottom and learn gradually the whole work of the establishment." Mr. Crum himself, after leaving Oxford, started work in an office on £12 a year. Both the witnesses were emphatic that graduates of commerce who want to start on Rs. 300 a month would not find employment. They feel, however, that a good university education should enable a man who starts at the bottom to rise quickly. Mr. Crum subsequently amplified this in a letter to one of our members in which he explained that while in no way decrying the value of academic education, he laid far greater stress on the value of university life "from the point of view of discipline, association with boys of the same age and the inculcation of a spirit of work and play together for the common good and at the same time of that independence which cannot be learned at school."

"Give me," Mr. Crum wrote, "the same type of boy at 18 without university education and at 22 with a good university education, and provided the letter is willing to begin at the bottom, I am certain that at the age of 27 the university boy will in the majority of cases be drawing far the higher salary."[1]

39. Mr. Girindra Kumar Sen, the Principal of the Government Commercial Institute, Calcutta, writes as follows:—

"In Bengal a degree would seem to be a meaningless thing so far as practical life is concerned. . . . . There is no short cut to success in commercial life and, in the absence of at least a few men of the province taking to business, the chances of my countrymen in Bengal are very small in getting themselves engaged in the higher administration of commercial enterprises by merely possessing a degree. On the other hand the natural tendency of a holder of it would be to expect, immediately after he has possessed it, a position of some responsibility, unaware of the fact that college gives the finish and experience the start, with the result that disappointments would multiply inevitably. If, again somehow the degree is believed to be equivalent to a certificate of competency by some wealthy men leading them to entrust some of the new graduates with new enterprises, the result would be disastrous, giving a set-back to the healthy growth of trade in the province."[2]

(D) The Calcutta Technological Institute scheme.

40. In 1908 Mr. J. G. Cumming recommended the establishment of a technological institute, the nucleus of which should be the industrial chemistry classes which had then recently been

[1] General Memoranda, page 25.

[2] Question 7.

suggested for the Sibpur College.[1] It is necessary to explain at this point that the Government of Bengal had in 1905 asked the Government of India to sanction the removal of the Engineering College from Sibpur to Ranchi in Chota Nagpur and the sale of the Sibpur property to the Port Commissioners of Calcutta. The Government of India agreed in 1909. In the report on Public Instruction in Bengal for 1909-10 it was observed that one of the wants which would have to be satisfied when the Sibpur College was removed to Ranchi, was that of a Government technological institution in Calcutta for the teaching of mechanical and electrical engineering and industrial chemistry.[2] In 1912 the question of the establishment of a technical institute in Calcutta was referred by the Government of Bengal to a committee of officials and representative commercial men on which the Calcutta University and the Calcutta Corporation were also represented. This committee recommended the establishment of a technological institute in Calcutta and they advised that this institute should be quite distinct from the Civil Engineering College.[3] In the same year (1912) Lieutenant-Colonel E. H. de V. Atkinson, who was then Principal of the Roorkee College, and Mr. T. S. Dawson carried out, under instructions from the Government of India, an inquiry into the question how technical institutions in India could be brought into closer touch, and more practical relations, with employers of labour and their report was published.[4]

41. A parallel movement had been taking place in Eastern Bengal. As the result of a conference which was convened in Dacca in 1909, the Government of Eastern Bengal and Assam had worked out an elaborate programme for the industrial development of that province, which included, among many other things, the establishment by Government of a central industrial institute at Dacca and a number of demonstration factories. The capital cost involved in this programme was nearly 14 *lakhs* and the

[1] Review of the Industrial Position and Prospects in Bengal in 1908 with special reference to the Industrial Survey of 1890. Part I of Special Report—Calcutta, 1908.

[2] Report on Public Instruction in Bengal, 1909-10 (Calcutta, 1910), para. 376.

[3] Report of the Technical Institute Committee appointed by the Government of Bengal in their Resolution no. 302, dated the 20th January 1912, Calcutta, 1912, para. 4.

[4] Report on the Enquiry to bring Technical Institutions into closer touch and more practical relations with the Employers of Labour in India by Lieutenant-Colonel E. H. de V. Atkinson, R. E., and Mr. T. S. Dawson (Calcutta, 1912).

recurring cost about 2½ *lakhs*. Owing to the territorial re-adjustment of 1912, this scheme also came within the purview of the Government of Bengal.

42. Early in 1913 Mr. R. Nathan was instructed by the Government of Bengal to work out, in consultation with Mr. G. W. Küchler, who was then Director of Public Instruction in Bengal, and Mr. Everett who was then, and still is, the officer who deals, under the Director, with technical and industrial education, the proposals of the 1912 committee for the establishment of a technological institute in Calcutta, keeping in mind the report of Colonel Atkinson and Mr. Dawson and the proposals of the Government of Eastern Bengal and Assam. Mr. Nathan worked out in great detail a scheme for a technological institute in Calcutta, which was to comprise the following departments :—

Department.	Number of students.	
	Day classes.	Evening classes.
Engineering—Mechanical, Electrical and Civil . .	300	300
Textile Fabric, Jute and Cotton	70	...
Chemistry for engineering, textile and special students .	15	...
Printing	110	...
Commerce	140	60
For women—dress making and millinery . . .	40	...
Total .	675	360

43. It was suggested that the Imperial Secretariat and the Government Press building, which lies to the west of Government House, Calcutta, should be used for the purposes of the institute, but even so the capital cost of the scheme was estimated at Rs. 10,20,000, and the recurring cost at about Rs 5½ *lakhs* per annum. We understand that there has never been any prospect of the Government of India being in a position to hand over the Secretariat and Press building. This scheme presumed the realisation of the Dacca University Committee's proposal that a civil engineering college should be established as a part of the Dacca University in place of the Sibpur College [1] and that this should be the only institution in the Bengal Presidency for the higher

[1] Review of the Industrial Position and Prospects in Bengal in 1908 with special reference to the Industrial Survey of 1890. Part I of Special Report—Calcutta, 1908.

training of civil engineers. The institute was to be a Government institution, controlled by a council. It was to conduct its own examinations and award its own diplomas. The only point of connexion between it and the Calcutta University was that the higher courses in mechanical and electrical engineering were to lead up to a degree awarded by the University.[1]

(E) The Calcutta University technological education scheme.

44. A committee appointed on October 13, 1917, by the Senate of the University of Calcutta " to consider the feasibility of the University taking steps to develope the teaching of the higher branches of agricultural, technological and commercial studies " reported in the following month in favour of the proposal and framed a ' rough outline ' of a scheme of studies in technology. The report of this committee was adopted by the Senate on December 1st, 1917, the question of details to be settled in consultation with the Faculties being referred to the Syndicate. The recommendations of the Faculties were brought before the Senate on February 9, 1918, when a new committee was appointed to frame regulations. The report of this later committee, dated March 13, 1918, was accepted ten days afterwards by a majority of the Senate who recorded the resolutions. Its recommendations were then submitted to the Government of India for sanction. On June 12, 1918, the Government of India forwarded a copy of the proposed regulations for our consideration, stating that they did not ' feel in a position to pass orders on the draft regulations for examinations in agriculture, technology and commerce without having before them the views of the Commission on the inclusion of such subjects in university courses.' We shall return to this subject in Chapter XLVIII below.

(F) Evidence on proposals for technological education.

45. One of the questions put by the Commission (Question 6) dealt with the callings necessary for the service to, and the advancement of, India and for which a high degree of training is required. Our correspondents gave in reply a considerable list of industries which should be developed in India and specially in Bengal. The list included agriculture, various forms of engineering, mechanical, electrical and mining—textile, leather and dyeing industries.

[1] Report on a Technological Institute for Calcutta.

Correspondents were also invited[1] to say whether in their opinion "the University should provide or recognise approved courses of instruction in optional science and technology and whether it should provide facilities for research in these branches." Three main types of answers have been given to this last question.

The first answer is that it is not the business of the university, as such, to have anything to do with technology. The conduct of examinations and the conferment of degrees will not solve the problem of technical training; what is required is the founding of schools where education of a practical type will be given to the students. This requires expert knowledge and the co-operation of Government, the public and especially of the commercial community. An academic institution is scarcely in a position to undertake this work. The University should confine itself to pure science.

A second view is that the University of Calcutta should be modernised on the lines of some of the newer universities of Great Britain and give teaching and practical training in various kinds of applied science. A variant of this view is that a technological university should be established quite apart from the existing University of Calcutta.

The third view, while substantially in agreement with the second, lays stress on the fact that, in view of Bengali tradition, the University stands for a great deal in the minds of the middle classes and should therefore put its hall-mark on industrial courses by offering instruction and awarding degrees.

46. One of the strongest supporters of the first view is Mr. E. Vredenburg of the Geological Survey of India who was for many years the lecturer on geology at the Presidency College, Calcutta. He writes as follows:—

"While technical education deserves by all means to be supported and encouraged, we must avoid the risk of the University becoming unwieldy by embracing too many activities, and we must also avoid the risk of technical training becoming developed to the detriment of pure science. Probably the establishment of a separate self-contained Faculty will meet the requirements of the case.

Modern requirements demand ever-increasing specialisation in the higher studies. In order therefore to safeguard a minimum of sound general education, providing a common basis of thought, we must avoid starting specialisation at too early a stage. The candidates to the technical

[1] Question 7.

institutions should therefore have received the same general education as those selecting other courses of study."[1]

Dr. N. Annandale, the Director of the Zoological Survey of India, writing from the point of view of a biologist is equally emphatic :—

"So far as applied biology is concerned I consider it far more important that a sound training in pure science should be provided by the University than that it should attempt to provide instruction in such technical subjects as economic entomology and fisheries. With a sound theoretical training a student would learn the application of biology to such subjects much better in the field in connexion with technical institutes such as the Agricultural College at Pusa, than he would in a university class."[1]

47. Mr. M. B. Cameron, the Principal of the Canning College, Lucknow, writes that it seems to him to be "literally preposterous —a putting of the cart before the horse—to talk of university recognition for commerce and industry in India."

"The first thing is to get commerce and industry abundantly, to get them developed to something approaching the degree of specialisation and skilled performance that exists elsewhere.

There is abundant scope for technological institutes and for systematised courses of instruction regulated by chambers of commerce, bankers' associations, and by professional societies and trade guilds of one kind or another. Efficiency in the labour that serves commerce and industry is the most urgent need in India at the present time and the most direct means of improving it will be the best. Little good will come either to commerce and industry or to the universities by trying to improve that efficiency by means of the institution of university courses of instruction . . . .

On the whole I see much advantage in anything that helps to correct the popular superstition that the university is a sort of universal provider or Whiteley's to which every one in want of a career must go . . . .

When the various technological institutions have done their work and supplied commerce and industry with the efficient, well-instructed, well-trained labour which alone can lead to their expansion, then the question of a pursuit of these studies in the university spirit will arise. To raise it at present seems to me only to confuse the issues very seriously."[2]

48. Mr. C. H. Bompas, the Chairman of the Calcutta Improvement Trust, does not think the University should under present conditions provide courses of instruction in applied science and technology :—

"There is no reason," he writes, "why the university should teach everything unless it is admitted that teaching is, in itself, an art which is the exclusive possession of university professors. I do not think that this is so. The

[1] Question 7.

[2] Question 6.

tendency in India is to regard the study of books as an efficient substitute for practical training: this tendency, which is a bad one, will be fostered by entrusting instruction in applied sciences to the University."[1]

49. Mr. G. E. Fawcus, the Officiating Director of Public Instruction in Bihar and Orissa, expresses a somewhat similar view:—

"In India at present instruction in applied science and technology is perhaps best kept separate from university control. There is a tendency amongst the literate classes to dislike manual work and a consequent danger that students who complete a university course in applied science or technology may be deterred by the dislike of manual work from making use of their knowledge. In this way expenditure incurred on their instruction would be practically wasted. To prevent such waste it seems essential that practical and theoretical work should be very closely combined and this would appear to necessitate the theoretical work being given in centres immediately adjoining the workshops or other places in which the practical work is carried on. It would further appear to render it desirable that any instruction in applied science and technology should be closely supervised by a body consisting mainly of practical men engaged in the industries concerned rather than by one such as a university Senate."

50. The Senatus of the Scottish Churches College, Calcutta, write:—

"Technical schools and colleges fail in their practical use except for those who have already passed through a strict apprenticeship or intend to do so at the close of their school course, and they ought to be supplied only when such a demand arises. Such schools and colleges have been much talked about in India and by many have been commended as certain to create avenues of employment. This is a dangerous delusion. . . . . It would be unfortunate, to say the least, if the University, by constituting technological colleges and granting diplomas or degrees beyond what it does, further encouraged the mistaken idea that such titles make a man an engineer or a mine manager."[1]

51. The Rev. Garfield Williams remarks that the technical college of university status must follow, not precede, the factory, otherwise men are turned out who can get no employment. His view is that there is no serious demand for Indians trained in such colleges. He thinks that the time has not come for the Calcutta University to consider the provision of instruction in technology to the possible neglect of its more urgent responsibilities:—

"The one thing above all others required of the Calcutta University at the present juncture is," he writes, "to confine its activities to such students as can really profit by its training, to make that training comparable to that given in other universities of the world, both in its matter and in its manner, to widen the horizon, clarify the vision, harden the moral fibre of these selected students and to send them out of the University with a sense of the dignity

[1] Question 7.

of labour, that, wherever they go, they may preach those ideals which will of themselves bring in a new era in education. Our present reformation should be undertaken to produce men who will themselves build up the University of the future. If we produce real men instead of the unlettered mob we at present produce, we can safely leave them to produce an indigenous type of university which will really meet the need of India. What we have to do now is to produce these few men, apostles of a new educational revival in India, men capable of thinking out the problems of the educational future of India, of making decisions unswayed by the political considerations of the moment and capable of breaking through the economic and social shackles by which their activity and development have hitherto been hopelessly retarded."[1]

Nevertheless Mr. Garfield Williams is of opinion that beginnings must be made with the foundations for future development :—

"At present our chief work should be to encourage technological research in our universities. Five Indians—enthusiastic *chelas* of a technological expert, working in his laboratory on terms of intimacy with him—will do more good than five thousand B.A. LL.B.'s for the future of Calcutta University and for the future of India. For this reason we should aim at providing the very best and be prepared to spend as much money on such a department (although it will be utilised by very few students) as on any other department. Moreover, university professors of technological sciences should be the best we can get and should be told that a great part of their work for some years to come will be research work, gathering together a few disciples and with their aid attempting to change the present attitude of the people of India to technological pursuits."[2]

52. Mr. H. Sharp[2] expresses the view that it is advisable that research should form part of university activity in technological subjects ; but he thinks that "the prime duty of the professor in India at present is teaching." He reminds us of the danger of the dissipation of research activities and of the existence of the Tata Institute for research in applied science at Bangalore, which he thinks is best separated from a university "especially at the present stage of university development in India." He adds :—

"I would also sound a note of warning about the word 'research' as applied to other subjects, as well as technology. It has recently become a shibboleth in India as regards both qualifications and duties. . . . . The pursuit of research, unaccompanied by other qualifications, does not necessarily stamp a man as a suitable teacher in university work. The man who poses as no more than a teacher is often in reality an unadvertised researcher of the highest order."

53. The view that the University should not attempt technological training is by no means confined to European witnesses.

[1] Question 6.

[2] Question 7.

Sir Ramkrishna Bhandarkar[1] holds that the University should not provide or recognise courses in applied science and technology as qualifying either for degrees or for diplomas. He thinks that higher technological training should be entirely segregated from other branches of higher education and that the University should confine itself to pure science. Mr. Brajalal Chakravarti's view[1] is that the value of the applied sciences consists in their success in the market and that this is a matter outside the province of the University. He adds that a degree in those subjects conferred by the University will not of itself be of much value and that technological training is better left to persons who are actually engaged in the practical work of industries, the university's function in this matter being the teaching of pure science. The view of Mr. Kishori Mohan Chaudhuri[1] is that a university should not concern itself with technological training, but that there should be separate independent colleges for this purpose, each regulating its own teaching and examinations and awarding its own certificates. Mr. Bamapada Dutt,[1] Mr. Altaf Ali,[1] and Rai Bahadur Bagvati Sahay[1] share this view. Mr. Mohini Mohan Chatterji[2] maintains that the University should not assume the charge of technical education "to the impairment of its true aim—the formation of character and the improvement and expansion of the intellect." The position of Mr. Jatindra Chandra Guha is that if the University is to take the responsibility of founding institutions of this nature, it should obtain special funds for the purpose and not "divert any portion of the income of the general department of the University to any special purposes like these."[1]

54. Mr. R. P. Paranjpye[1] insists that a university should not recognise mere technical training, though it may do so without objection where such training is combined with pure science. He holds that universities should work in close co-ordination with technological institutes, though these two types of institution should be kept separate. The view of Rai Satis Chandra Sen Bahadur[2] is that, while the University should deal with applied chemistry, industrial training generally, including training in

[1] Question 7.
[2] Question 6.

commerce and banking, ought to be carried on in colleges or institutes which should be founded by Government and controlled by it for a period—the suggestion is 15 years—and then handed over to suitable corporate bodies; for example the banking institute would be handed over to a corporate body of bankers.

55. With the view which emphasises the necessity for the university hall-mark we have already dealt in discussing the question of an academic training in commerce.[1] We recognise the dangers of this view but we cannot ignore it, for it is a vital factor of the problem.

"The pursuit of a degree," writes Mr. F. W. Südmersen, the Principal of the Cotton College, Gauhati, "is the prevalent fashion in India. We may accept it as a fact and endeavour to set aside limited views of the function of a university in the hope of directing pursuit to possibly more remunerative channels. But in the absence of 'industry' and of industries of an indigenous origin, the issue is doubtful. Where polytechnic schools suffice in England, the bribe of a degree must be offered in India. But, unless the peoples themselves change their habits, we shall in the end only create greater evils."[2]

56. Dr. Nares Chandra Sen Gupta, the Vice-Principal of the Dacca Law College, puts the position as follows:—

"University education and degrees have got a very great social value in our society. . . . . Naturally therefore a technical course outside the University would not attract the best young men nearly as strongly as a university course would. It would be unwise to lose the aid of this important asset in our attempt to direct the minds of our young men towards these vocational courses. A taste for them, it must be remembered, has to be very largely created."[2]

Mr. Biraj Mohan Majumdar, the Vice-Principal of the Calcutta Law College and a member of the Syndicate of the Calcutta University, states that in India no course of training will command general respect, unless it is associated with a university degree.[3]

57. The weight of our evidence is in favour of the university providing and recognising courses of instruction and facilities for research in connexion with applied science and technology. Metallurgy and metal work, iron, steel and allied industries, various coal tar and oil and fat industries, leather tanning, dyeing, textiles, pottery, silk rearing, fish culture, fish curing, fish preserving and fish oil industries, chemical industries, glass making, paint, polish

[1] Paras. 36—40 above.
[2] Question 6.
[3] Question 7.

and varnish manufacture, have all been mentioned as industries in the development of which the universities of Bengal should assist. "I am strongly of opinion," writes Dr. David Thomson[1] of the Cotton College, Gauhati, "that the University should provide or recognise approved courses of instruction in the applied sciences and technology of the existing industries and should also provide facilities for research in these branches of knowledge. Nothing would do more to link up the University with Indian industrial development of which the University ought to be the brain." Dr. Gilbert Walker's view is that "the University should provide courses, as far as possible, in . . . . engineering, agriculture, technical chemistry, music, art and mining, and, where the University cannot conveniently provide them, it should recognise them." He also holds that "facilities for research should be provided, but not necessarily or entirely at the University. It might be more convenient for researches to be carried on at some institution recognised by the University."[1]

58. Sir Nilratan Sircar writes as follows:—

"Under the present conditions it is desirable for the university to organise education in applied science and technology in at least two standards, *viz.*, a high standard for degrees and a somewhat lower one for licences or diplomas. It matters little whether the University itself provides courses of instruction or recognises such instruction in affiliated institutions so long as the latter are under her control and are properly equipped. Further the university should provide facilities for research in these branches. . . . . .

A college of agriculture, a college of commerce, a college of technology in which leather-tanning, and dyeing, and some other chemical industries may be taught, should be maintained by the University of Calcutta. Further, some colleges may be affiliated to the University, their teachers being recognised by the University. Then again, certain institutions like the Geological Survey Department, the Pusa Institute, the Botanical Gardens of Calcutta, the Zoological Department of the Museum, etc., may be utilised for the purposes of training students in these subjects.

For this purpose, some of the experts and scientific men connected with these institutions must be recognised as university professors or lecturers."[1]

59. Dr. Wali Mohammad,[1] Professor of Physics at Aligarh, goes further:—

"The university," he writes, "should provide the highest education and instruction in applied science and technology and offer every facility for research in these branches of knowledge. The Government could render the best service to the economic development of the country by giving special grants for

[1] Question 7.

carrying out research in applied science. The examples of State-fed research at the German universities and of public-supported research at Manchester and Birmingham can be safely imitated. . . . . .

The university should take over all technological institutions, which should be regarded as departments of the University. The University should not only supervise and control the teaching, but should take the responsibility of attending to the residence and the general training of the students. The advantages of creating a university atmosphere by bringing together the teachers and students in arts, science, technology, etc., together, and the facility in providing the various courses common to the various faculties become self-evident."[1]

60. Mr. Wahed Hossain thinks that—

"the Indian universities should adopt the same methods and courses of instruction in applied science and technology as have been adopted by the modern universities of Liverpool, Manchester, Leeds, etc., as qualifying for degrees or diplomas."[1]

He also advocates the provision by the university of facilities for research in applied science and technology and he argues that "unless proper incentive is given to research, the technological study will be barren." Mr. Alfred Hay of the Tata Institute, Bangalore,[1] is of opinion that applied science and technology should form an important part of the scheme of any modern university and that degrees and diplomas should be granted in these subjects. He thinks that facilities for research should be provided in every subject taught at a university. On the other hand Mr. S. W. Cocks of the Burma Education Department, though he thinks that "the University should associate itself with the highest degree of instruction in applied science and technology," holds that "the provision of facilities for research in these branches hardly falls within its province."[1]

61. One hundred and forty-three of our witnesses have replied to our question[2] whether higher technological training should, or should not, be segregated from other branches of higher education. Seventy-nine have expressed themselves in favour of segregation and sixty-four against it. But all these witnesses, whether they advocate segregation or not, are in favour of the University dealing with technological training. Mr. Jyotibhushan Bhaduri,[1] Professor of Chemistry at the Presidency College, remarks that duplication is both wasteful and unnecessary, and that the same college, if

[1] Question 7.
[2] Question 7 (ii).

properly equipped, should carry on teaching work both in pure and applied science. Sir J. C. Bose[1] writes that there is no reason why there should be segregation of higher technological training from other branches of higher education; adding that segregation in the present stage of finance will make higher technological training an impossibility. Dr. David Thomson sees nothing but advantage to all concerned in the direct association of higher technological training with the other branches of higher education.

"The combination," he continues, "is successful in Europe and I know no reason why it should not be successful in India. Indeed it is all the more necessary here if the mind of young India is to be weaned from its traditional idealism."[1]

We quote below the view of Mr. Patrick Geddes:—

"The segregation of technological teaching from the older higher education in Germany, and largely in other countries seems to have arisen from two reasons, on one side the passive or active prejudice and jealousy with which the old professions have in the main regarded the new ones, and especially the technological ones, and on the other the reciprocal disrespect with which active energy is wont to look at the older professions, as of well-endowed convention and the like. How far this view of each other—as in short preponderatingly fossil or Philistine respectively, is or has been just, how far unjust, need not here be discussed, since the violence of both views is happily abating.

The way in which pure science and its application may be cultivated, with new efficiency for both and harmony accordingly, is well illustrated by the recent Edinburgh University Institute of Mathematics,—the whole building of a former training college transformed into work-rooms in which beginners, advanced students, and the investigators, and these in pure mathematics and its applications as to statistical and actuarial work, as to mechanical, civil, electrical and aerial engineering, etc., all now find their place under a teacher of organising genius and, of course, with due and increasing staff."[1]

62. The view of those who advocate segregation is based mainly on the apprehension that, without it, the training will be too academic and not sufficiently practical. This apprehension has induced some of our correspondents to advocate the establishment of a separate technological university.

"Calcutta affords," writes Mr. A. C. Datta, "a good opportunity for possessing a university of the modern type for the study of higher applied sciences and technology; and, for that reason, a university is necessary for Calcutta alone which ought to be separated from the classical university of the purely idealistic kind. I do consider that the time has come to differentiate the university functions of two different kinds. In that case, the modern

[1] Question 7.

Calcutta University should undertake the teaching of all the technical and professional branches of studies, which are to be excluded from the curricula of the other university, which is to be for the purpose of purely ideal education."[1]

63. Mr. Atul Chandra Sen feels that a new organisation is wanted—and he therefore makes the following suggestion :—

"Now the question is what the University can do for industrial and agricultural education in this country. It would of course be very easy to found degrees in commerce, agriculture and technology. But merely holding examinations or conferring degrees will not solve the problem of technical education. What is wanted is the founding of schools and colleges for such education and giving practical training to the students. All this requires expert knowledge and co-operation of Government, the public and especially the mercantile community. The academic universities are hardly in a position to undertake this work. I would therefore suggest the establishment of a separate technological university which would incorporate and expand all the different institutions now giving technical education in the province. But the academic universities may provide all the necessary scientific education preliminary to the admission of students into the technical institutions. For this purpose it would be necessary to introduce the teaching of elementary science in schools and those who would be desirous of joining a technical institution may continue their studies in science at the high school and the collegiate stages."[2]

64. Dr. P. Neogi[1] of the Rajshahi College, suggests that owing to the financial stringency caused by the war it will be difficult for Government to find funds for the proposed Calcutta Technological Institute. On the other hand "Government is pledged to establish a university at Dacca." His proposal is therefore that the Dacca University should be wholly a technological university. Mr. Baroda Prosaud Dey[1] advises that technological training should not form a department or departments of the University, but should be placed under boards of experts, the University exercising general control and granting degrees and diplomas. Mr. Manmathanath Banerji[1] thinks that the best solution would be the creation of several departments of technology and applied science under the University with provision for the inclusion of experts—representatives of Government, manufacturing and trading concerns, on the governing bodies—but he recommends that all departments of applied science and technology should remain outside the control of the academic senate and syndicate of the existing constitution. Mr. P. Basu[1] thinks that the department of applied science and technology should be an entirely separate branch

[1] Question 7.
[2] Question 6.

of the University. Many advocate the constitution of a faculty of applied science and technology. The strongest supporter of this is Rajah Reshee Case Law, a man of wide commercial interests.

"The department of applied science and technology," he writes, "should not form part of the Faculty of Arts. If it does, it would necessarily occupy a subsidiary place in that Faculty, and in the course of time the department may die of inanition."[1]

65. Those of our correspondents who think that the University should take up technological training hold various opinions as to the scope of that training. Some advocate a system of technological courses starting from the matriculation stage and leading both to diplomas and degrees. Others favour degree courses only and those starting from the intermediate stage. A third section—and this is the smallest—hold that the University should not attempt to train in technology any but graduates, though some of the advocates of this policy recognise that the work done for the degree examination by prospective technological students should bear definitely on the subsequent technological training. These correspondents who fall under the last of the above categories maintain that it is not the business of the University to train workmen.

"The technological side of the University," writes Justice Sir Asutosh Chaudhuri, "should be open to students who have received adequate training in pure science. Workmen or mechanics are not to be created by the University, but intelligent and scientifically trained workers able to work for themselves and instruct others."[1]

The Bengal Landholders' Association[1] has written in almost identical terms.

66. Some of our correspondents hold that the University should supervise and control, and, if possible, provide, technical training in all its grades. Thus Mr. Radhakamal Mukerjee[2] advises that the University should organise vocational classes for boys of 14 years and upwards in wood-working, metal-working, electrical work, printing and textiles with special reference to the typical trades, arts and handicrafts of particular regions and centres. Proposals of this sort are doubtless due mainly to a dislike of Government departmental control and the feeling that the University is the nearest approach to a public and representative educational authority. Mr. Baikuntha Nath Bhattacharyya[2] states that in his opinion

[1] Question 7.
[2] Question 6.

"education in all its aspects should be diffused, directed, supervised and controlled by the University" and that "as such no branch of learning, intellectual, commercial, industrial or economic can be considered outside its province." "In any case, even if the University," writes Mr. P. Basu,[1] "be not called upon to undertake technical and technological training, some public body other than the Government, constituted more or less after the University, should be the controlling body as to the internal administration, as to the selection of courses of study, and as to the approval, if not the appointment, of the staff."

67. We have discussed elsewhere the suggestion that the University should assume the functions of a public authority for all grades of education.[2] For the purposes of this chapter we may quote a passage from the evidence of Mr. E. F. Tipple, Professor at the Roorkee College :—

"In India much confusion has existed between high and low grade technical education, and it is only now being realised administratively that the high grade must be reared on foundations laid in the secondary schools."[3]

We endorse Mr. Tipple's views in this matter.

68. Dr. Brajendranath Seal has written in a similar strain :—

"We cannot build an edifice of technology in the University except on a sound foundation of sense training, manual training and the cultivation of resourcefulness and individuality. . . . . The problem is to create business aptitude and industrial interest in a gentle and genteel literate folk, a change of *venue*, in fact, in a whole people or race, and for this what is wanted is a uniform distribution of pressure in all strata and all stages, and not a top-heavy or a bottom-heavy education; even though it should cease to be purely literary."[3]

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[1] Question 6.

[2] See Chapter XXVIII, paras. 63-67.

[3] Question 7.

CHAPTER XXVII.

GOVERNANCE AND ADMINISTRATION OF THE UNIVERSITY OF CALCUTTA.

I.

1. In a previous chapter[1] we have traced the historical development of the University of Calcutta. At the time of its foundation under the Universities Act of 1857 its chief officers were the Chancellor, and the Vice-Chancellor assisted by the Registrar. The Senate, whose members were called Fellows, was the ultimate authority of the University, subject to such powers as were reserved to Government.[2] Provision was also made for the creation of academic authorities called Faculties.

2. The constitution of the University, as defined by the Act of 1857, remained undisturbed until the Universities Act of 1904 was passed after an inquiry conducted by the Universities Commission of 1902. The Lieutenant-Governor of Bengal was then appointed Rector of the University; the Syndicate was recognised as the executive authority; and changes were made in the composition of the Senate whereby the privilege was granted both to the Faculties and to the registered graduates to elect a certain proportion of the Fellows.

II.—The Senate.

3. Under the Universities Act of 1857, the general control of the University was placed in the hands of the Senate, consisting at that time of 38 Fellows in addition to the Chancellor and the Vice-Chancellor; of these Fellows nine were *ex-officio* and 29 were ordinary. It was provided that the minimum number of Fellows (exclusive of the Chancellor and the Vice-Chancellor) should be thirty, and that after the passing of the Act all the ordinary Fellows should be nominated by the Governor-General in Council.

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[1] Chapter III.

[2] Chapter XXVIII.

No maximum number of Fellows was fixed. The first Senate[1] included the principals of all the colleges situated in Calcutta, two judges, two leaders of the Bar, five ecclesiastics, two directors of public instruction, two inspectors of schools, five doctors, and five military officers taken mainly from the scientific services. The original intention was obviously that the Senate should be a small body of men, competent to give advice to Government on the development of higher education in Bengal and to supervise the activities of the affiliated institutions.

4. In the course of time the idea sprang up that the Senate should be a more representative body. In 1890, Lord Lansdowne, as an experiment, decided that he would exercise his power of appointment to two Fellowships on the recommendation of the graduates of the University, who were to make their choice by a process of election. It was subsequently decided from time to time how many new Fellows should be appointed by the Governor-General on his own initiative and how many after selection by the graduates.

5. The Universities Commission[2] found that the Senates were too bulky in numbers and incapable of exercising proper control in educational matters. In 1900 the number of Fellows in Calcutta had risen to 200, the maximum point reached. At the end of 1901-02 there were 181 Fellows, including the Vice-Chancellor and the *ex-officio* Fellows, and of this total 21 had been elected. The diminution was the result of Lord Curzon's abstention from the filling of vacancies. In certain other universities the increase in the number of the Senate had been even more marked than in Calcutta, the number of Fellows in Bombay University being as many as 305, and in Madras 208. It appears from the report of the Universities Commission[2] that a Fellowship was often regarded as a distinction bestowed by way of compliment, without due regard to the qualifications of the recipient; and that this method of appointment led to considerable apathy and irregular attendance on the part of many of the Fellows.

6. The Commission did not approve of trusting to a more careful policy in the matter of future appointments to effect the

[1] Universities Commission Report of 1902, para. 11.

[2] Report, para. 33.

changes which they desired, nor did they recommend the repeal of the Acts of Incorporation and the reconstitution of the universities. They adopted instead a middle course, and advised[1] that :—

(*a*) The existing Senates should be dissolved and new Fellows appointed mainly or partly from the existing Fellows.

(*b*) The number of ordinary Fellows in Calcutta should be limited to one hundred.

(*c*) Power should be taken to distribute the Fellows according to Faculties.

(*d*) The system of election by graduates should be confirmed by statute ; and the elected Fellows should not exceed one-tenth of the whole.

(*e*) A time limitation of five years should be imposed on the tenure of ordinary Fellowships, whether made by appointment or by election.

(*f*) The bestowal of the appointment of Fellowship should be based on academic, as opposed to complimentary, grounds.

(*g*) The existing Fellows not appointed to the Senate should retain the distinction of an honorary Fellowship.

(*h*) Honorary Fellowships might be conferred on benefactors and others who deserved well of the University.

7. Sir Gooroo Dass Banerjee,[2] in a note of dissent, advocated the idea that the Senate should be a more representative body. He thought that it would be unfair to leave many of the existing Fellows with the empty honour of a name without giving them any direct or indirect voice in the management of the University. He also feared lest the temporary character of the tenure of office by the members of the Senate might tend to impair their independence and incline them sometimes to decide questions not according to their merits but according to the wishes of those with whom the power of re-appointment virtually rested. He desired that the existing Fellows should retain some substantial privileges, that the independence of the Senate should not be infringed, that the elective element should be increased and gradually improved, believing that the non-educational members of the Senate would be useful in deciding broad and conflicting questions of policy. He recommended the constitution of two bodies, an outer, the body of Fellows, and an inner, the Senate. The existing Fellows were to be retained in office, the number of Fellowships being fixed at 250. Of the total number of Fellows appointed annually, one-third were to be elected by graduates of a certain

[1] Report, paras. 33-43.

[2] Report, pages 73-76.

rank or standing, subject to the approval of the Chancellor, and the remainder appointed by Government. All Fellows were to hold office for life. They were to enjoy the privilege of voting for the university representatives on the Local Legislature and the Municipality; and also of electing one half of the Senate; but they were not to have the right of voting on any other question connected with the University.

8. Sir Gooroo Dass Banerjee proposed further that the Calcutta Senate should consist of one hundred members, excluding the *ex-officio* Fellows, half to be elected by the Fellows from among their own number and the other half to be appointed by the Chancellor or the Government from among the Fellows. The elections and nominations were to be so arranged that in each case half should be college professors and the other half officials and non-officials not engaged in teaching. The tenure of office was to be for five years.

9. The Universities Act of 1904 was passed very largely in accordance with the recommendations of the majority of the Commission so far as the composition of the Senate was concerned. The number of *ex-officio* members was raised from nine to ten and can be altered within this limit by Government. The present *ex-officio* members are (1) the Chief Justice of the High Court of Judicature in Bengal, (2) the Lord Bishop of Calcutta, (3) the Ordinary Member for Education of the Council of the Governor-General in India, (4—6) the Members of the Bengal Executive Council, (7) the Director of Public Instruction, Bengal, (8) the Director of Public Instruction, Burma, (9) the Director of Public Instruction, Assam. Exclusive of the Chancellor, the Rector, the Vice-Chancellor and these *ex-officio* Fellows, the Senate now consists of one hundred members who are termed Ordinary Fellows.

10. Statutory recognition was also given under the Act to the privilege of election. Twenty Fellows are now elected, ten by the registered graduates and ten by the Faculties. The right of voting for the former category is limited to graduates holding the degree of Doctor or of Master and to other graduates of ten years' standing. The elections by Faculties and nominations by the Chancellor are made in such a manner as to secure that not less than two-fifths of the Fellows so elected and so nominated respectively shall be persons following the profession of education.

The tenure of office of an ordinary Fellow is five years. The election of a Fellow is made subject to the approval of the Chancellor. If an ordinary Fellow has not attended a meeting of the Senate other than Convocation during a period of one year, the Chancellor may declare his office to be vacated. All those who had been Fellows of the University previous to the Act and were not included in the new Senate received the distinction of an honorary Fellowship, and retained the right of voting for the university representative on the Legislative Council.

11. The Senate, thus reformed, continued to be the body corporate of the University and the ultimate authority in all matters connected with the University, except for special powers[1] reserved to the Government of India or to the Chancellor. Certain special powers are in the first instance reserved to the Syndicate, but the Senate is entitled to revise the decisions of that body.

12. In addition to the Chancellor, and in Calcutta the Rector, the Senates of the older universities are composed as follows:—

University.	*Ex-officio.*	Nominated.	Elected by Graduates.	Elected by Faculties.	Elected by Senate.	Total excluding *ex-officio* members.
Calcutta . . .	9	80	10	10	...	100
Madras . . .	6	80	10	10	...	100
Bombay . . .	6	80	10	10	...	100
Allahabad . . .	9	60	5	5	5	75
Punjab . . .	10	60	10	5	...	75

From this table it will be seen that the Senates of all these universities are constituted on the same lines, except that those of Allahabad and the Punjab have each only 75 members, excluding the *ex-officio* Fellows; and that at Allahabad the Senate has the privilege of electing five of its members. The other powers of the Senate are the same in all cases.

13. We have given much thought to the composition of the Senate, the appointment of its members and its functions; and the Government of India have drawn our attention to these matters in particular. The answers to many of our questions

[1] Chapter XXVIII.

display a widespread dissatisfaction with the composition and powers of the Senate, though there is a sharp division of opinion as to the remedies which should be applied. Some speak disparagingly of the results of election, while others advise that the principle of election should be materially extended. Again, while some suggest that the control of academic matters should be vested in the teachers, others are opposed to any reduction in the authority of the Senate.

14. The Senate is, in our opinion, too small a body to be adequately representative of all the interests which go to make up a national institution of learning; and it is at the same time too large a body for the effective control of educational administration.

15. Confined as it is to a small number of *ex-officio* Fellows and a hundred ordinary Fellows, the Senate cannot be an adequately representative body. One of the most important changes effected under the Universities Act of 1904 was the provision that two-fifths of the ordinary Fellows should be associated with the profession of teaching. But no college as a place of learning is represented as such on the Senate; and there are many colleges in which no member of the staff is a member of the Senate. The recognised schools also, though they come under the control of the University, have no representatives. Though the University deals with the higher education of women, no woman has yet been included in the Senate.

16. For many years there have been advocates of a direct representation of colleges and teachers on the Senate. During the discussions in the Imperial Legislative Council in 1904 the late Mr. Gokhale suggested that one-third of the Senate should be either elected by or assigned to the colleges; and an amendment to the Universities Bill was also proposed with the object of providing that representation by election should be given to the registered teachers of institutions affiliated to the University. Sir Thomas Raleigh who was in charge of the Bill sympathised with the proposal, but anticipated great difficulties in drawing up a satisfactory register of such teachers. He therefore opposed the amendment which was rejected by the Council.

17. Some of our correspondents have made similar suggestions. Sir Ramkrishna Bhandarkar[1] suggests that "the staffs of these

[1] Question 14.

colleges should be formed into a constituency and allowed to elect twenty-five ordinary Fellows." Mr. Promode Chandra Dutta[1] recommends that "the professors of colleges should elect thirty members from among themselves, each first-grade college having one representative and each second-grade college getting a representative every three years." Mr. C. V. Raman[1] thinks that "it is a matter of elementary justice, and in the best interests of education, that at least 50 per cent of the members should be Indian teachers." The functions of the Senate being what they are, it is clear that a large number of teachers should find places on the Senate; for the courses of study and the methods of examination which so vitally affect their teaching are determined by regulations which can only be altered by the Senate, subject to the sanction of Government.

18. The Faculties of Law, Medicine and Engineering elect members of the Senate; but there is no assured representation of the general bodies of learned professions other than that of university teaching. It is regrettable that the interests of industry and commerce are as such unprovided for. At a time when the University is contemplating a great departure in the teaching of commercial and industrial subjects, the Bengal Chamber of Commerce and the Bengal National Chamber of Commerce have no opportunities of expressing directly their views on the Senate through the agency of accredited representatives. Agriculture again has no definite place or standing in a university which serves the needs of provinces containing a vast rural population. We have already had occasion to refer to the lack of contact between the University and the leading zamindars of the province.[2] It should be added that, though the headquarters of the University are in Calcutta, the Corporation of that city has no official connexion with the University.

19. The constitution of the Senate makes no provision for the representation of communities. At the time when we began our enquiry the Senate included 42 Europeans, 48 Hindus, 8 Musalmans and 2 Indian Christians. The Musalmans feel strongly that they have a smaller representation than is reasonable in view of the fact that the proportion of Musalmans to the total

[1] Question 14.
[2] Chapter II, para. 15.

population of Bengal is slightly over half. The ambitions and the grievances of Musalmans form a difficult and important problem which is dealt with in a separate chapter of this report.

20. The conflicting claims of the several provinces which are included within the jurisdiction of the University also present grave difficulties of adjustment. From the province of Burma there are only two representatives, one of these being the Director of Public Instruction who is an *ex-officio* Fellow. During our visit to Assam officials and non-officials alike expressed the keenest disappointment at the very scanty representation of Assam on the Senate, though practically all were united in a desire for closer contact with the University. Colonel P. R. T. Gurdon[1] has drawn our attention to the fact that there are only four Fellows in the whole of Assam, and that "there is not one representative of Assamese Hindus who form the bulk of the population of the province."

21. Many parts of the Bengal mufassal also are placed in a similarly unfavourable position. Our witnesses from Chittagong, for example, complained that, since the temporary transfer of the Principal of the Chittagong College to Calcutta, that division has been totally unrepresented on the Senate. We made inquiries also at Rajshahi and Rangpur in this connexion and were told that there is only one Fellow, the Principal of the Rajshahi College, in the whole of the northern division; and yet in spite of its remoteness, this is a division in which we found strong feelings of loyalty and affection towards the University, and in which there are signs of considerable development, as is evidenced by the progress of the Rajshahi College and by the large benefactions which have lately been given towards the foundation of the Carmichael College, Rangpur.

22. Another defect in the existing order of things is, in our judgment, the method of appointment to the Senate. Eighty of the ordinary Fellows are nominated by the Chancellor, ten are elected by the registered graduates and ten by the Faculties. The existing principle of nomination, tempered by a limited measure of election, has failed to effect that contact with many of the forces

[1] Question 14.

which are essential to the well-being of the University. We wish to record our opinion that the right of nomination has been exercised with a keen desire to do justice to conflicting claims and interests and to include on the Senate men of eminence and of experience in educational matters. These duties require an intimate and first-hand knowledge of men and things; no authority, however single-minded, can effectively carry them out in a place many hundreds of miles distant from the headquarters of the University.

23. In his note of dissent to the report of the Universities Commission, Sir Gooroo Dass Banerjee expressed fears that the principle of nomination allied with the temporary tenure of the posts would impair materially the independence of the Fellows. It appears that in another province some years ago pressure was brought[1] to bear on certain official members of the Senate by its Government. But there is no evidence that such pressure has ever been exerted in Bengal. Indeed, one of the main difficulties has been that the Government of India, far from influencing unduly the discussions in the Senate, has been unable to expound its own policy effectively. We shall return to this question in the next chapter.

24. Advisable as it may be to make use of nomination as a means of securing the right composition—at once representative and administratively homogeneous—in a small body charged with executive functions, we are doubtful whether nomination is the best method to adopt in a predominant degree for the constitution of a large body, the main function of which should be to keep an execu-

[1] "When in 1908 the syllabus of the Bombay University was thought unsatisfactory, officers of the Indian Educational Service who were members of the Senate were expected by Government to give unquestioning support to a scheme of studies, in the framing of which they had had no previous opportunity of expressing an opinion." Memoranda of Mr. A. L. Covernton and certain members of the Indian Educational Service, Bombay. Public Services Commission, Question 84, 421.

"In his own experience, educational officers had had a free hand in all matters relating to the universities, but he gathered that in recent years they had received instructions as to the mind of Government in certain matters. Their influence would be very much greater if they were known always to be speaking their own minds, rather than acting as the mouthpieces of official policies." Evidence of Dr. Mackichan before the Public Services Commission, Question 84, 582.

"Government should not . . . . endeavour to influence debates on special subjects in the Senate." Sir R. G. Bhandarkar, Question 14.

tive in touch with public opinion. In such a case it is desirable that the members of the large body should feel that in a real sense they are spokesmen of special bodies of experience and, though not to the prejudice of their own independence of judgment, responsible for giving expression to the view which those bodies entertain.

25. Another view is expressed in the evidence. Mr. Mark Hunter,[1] writing from Madras, has told us emphatically that "unless the Indian universities continue to be assured of Government protection and control, that is to say, unless Government continues to nominate the great majority of Fellows in university Senates ... nothing but steady deterioration in our universities is to be looked for." We think it right to say that in the University of Calcutta the electors have used their several suffrages to place on the Senate many public men of standing who should be included under any system of appointment and who, in fact, are among those who play an important part in administering the affairs of the University.

26. The majority of our correspondents advocate a large increase in the elective element on the Senate, though very few have offered any constructive suggestions. The most common recommendation is that the number of members selected by the registered graduates should be largely increased.

27. There is a general impression that election by the Faculties has proved far more successful than election by the registered graduates. Dr. Hiralal Haldar[1] states that "few self-respecting persons, unless they are men of great eminence, have the chance of being elected under the present system." He is therefore prepared to suggest that "the right of election at present enjoyed by registered graduates should be taken away."

28. Out of more than 8,000 graduates only 832 are now registered on the electoral roll. This indicates clearly that the privilege of electing members of the Senate has not proved to any substantial extent a means of enlisting in the service of the University a body of graduates loyal to its interests and devoted to its advancement. It may be that the limitation of the franchise to graduates—apart from masters and doctors—of ten years' standing

[1] Question 14.

has made graduates reluctant to become registered, because by that time they have lost intimate contact with the University. It is significant that the Dacca University Committee[1] recommended that all graduates of over four years' standing should be granted the privilege of registration. We believe that this apparent indifference of the Calcutta graduates to their *alma mater* is mainly due to the present system of organisation; for during our tours we have met many graduates, some living in remote parts of the mufassal, who entertain warm feelings of regard for the University. It is a matter for regret that their valuable support has not hitherto been made available for university purposes.

29. The Muslim deputation which met us in Calcutta suggested that 30 per cent of the Fellows should be Musalmans. "These," they thought, "might be selected, ... partly by the Muslim educational officers, partly by the Muslim members of the governing bodies of colleges and hostels, and the rest might be nominated by the Governor."[2] Other Musalmans with whom we discussed the matter told us frankly that the privilege of voting under present conditions and with the existing electorates is in no way commensurate with the expense of registration.

30. A few of our correspondents suggest that an expansion of the elective privilege should not be confined to the teachers or the registered graduates. Sir Nilratan Sircar[3] suggests that the commercial and industrial interests, and the interests of the different professions of law, medicine, engineering, and the Corporation should be recognised as having a voice in the conduct of university education. Mr. R. P. Paranjpye[3] makes the same suggestion in more general terms: "The large majority (of the Fellows) should be elected by electorates of various kinds."

31. The composition of the Senate and the methods of appointment to it ought to depend very largely on its functions. The Universities Commission held that the Senate must be, in the main, a body of experts, and that it should be protected against the incursions of voters brought together in large numbers only by the prospect of an election or by a debate on some question which had been agitated out of doors.[4] It is doubtless for the

[1] Report, page 132.

[2] General Memoranda, page 210.

[3] Question 14.

[4] Universities Commission Report, para. 42.

same reason that Government has insisted on so large a proportion of nominated members; and the necessity for such a proportion has been accentuated in recent years by the fact that the University has undertaken very considerable teaching responsibilities. The management of post-graduate teaching and research must be in the hands of experts. The Senate itself, conscious of its limitations in these respects, has recently constituted, with the sanction of Government, the Post-Graduate Councils in Arts and in Science which consist almost entirely of teachers and are responsible for the main teaching activities of the University.

32. The present accumulation of functions in the Senate has prevented the University from enlisting in its service the activity of many representative men. The functions of the Senate being so numerous and varied, its meetings must be both frequent and prolonged. Hence it is clearly impracticable to include among the Fellows any considerable number of men from distant regions. Even those who are so included must inevitably face the alternative of neglecting either their duties at home or those in Calcutta. We made definite inquiries in this connexion from the principal of a college not far remote from Calcutta who has taken a leading part in the activities of the University, and have come to the conclusion that, in spite of his energy and enthusiasm, his college duties must inevitably suffer in consequence. The principals of two more distant colleges gave us rough estimates of the time spent by each away from his college on university business. In both cases it appeared to us inevitable that their necessary absence must interfere with college work. This difficulty moreover is not confined to mufassal members. Fellows resident in Calcutta cannot find it easy to spare the time for Senate meetings. For example, Sir Leonard Rogers told us that it was primarily for this reason that he had been forced to sever his connexion with the Senate.

33. The variety of topics which must be discussed at each meeting of the Senate presents further difficulties. The hard-worked teacher is anxious to improve the courses and curricula, the conduct of examinations, and the methods of teaching. Yet he has to listen to long discussions in which he takes little interest; and, when at last his own proposals come under discussion, they may be mangled beyond recall by men who have never taught a class or had any experience of college organisation. The busy professional or

commercial man again may be willing to assist the University in its general policy and business organisation, but to do so he is obliged to listen to many weary hours of discussion on matters of academic importance about which he can know little or nothing whatever.

34. The Senate therefore, as at present constituted, is an unsatisfactory compromise between two ideals. By reason of certain duties at present imposed upon it, its numbers have to be kept within limits which preclude adequate representation of all the categories of experience concerned. On the other hand, the necessity of securing the presence of some practical men of affairs denies to it the special character and value of an expert academic body. Both elements—expert academic knowledge and the experience of men engaged in non-academic business—are indispensable to a university. But the constitution of the University should be so framed as to assign to each its proper place in the preliminary discussions which issue in university policy, allowing to each element full representation in appropriate committees and assigning to a supreme executive, in general business and in educational questions alike, the duty of weighing the contributions made by academic and non-academic experience respectively, and of preventing the misunderstanding and misjudgments which arise from the disregard of either.

III.—The administration of the University.

35. We now pass on to discuss the administration of the University, the appointment and duties of its chief officers, the composition and functions of its executive authority, the Syndicate.

36. The Chancellor is the Governor-General of India for the time being, his chief duties being to preside over the annual Convocation, to nominate to eighty of the Fellowships, and to approve the remaining twenty of the Fellows who are elected.[1]

37. The Universities Commission of 1902[2] recommended that the Lieutenant-Governor of Bengal should be appointed Rector of the University with precedence next to the Chancellor, but without prejudice to the right of the Vice-Chancellor to preside at meetings of the Senate. Under the Universities Act of 1904 the Rector is

[1] Chapter XXVIII.

[2] Report, para. 38.

entitled to preside over meetings of the Senate. In view of the intimate relation which existed between the Lieutenant-Governor of Bengal and the University by reason of the influence exercised by the latter on education in Bengal, the Government of India considered it expedient after the passing of the Act that provision should be made for associating the Rector more closely with the administration of the University than had previously been the case. They therefore decided in 1906 that all letters addressed by them to the Registrar of the Calcutta University should be forwarded through the Rector except in cases of such urgency as to require direct communication with the Registrar. Similarly all correspondence addressed by the University to the Government of India must be submitted through the Rector. When the territorial re-adjustments of 1912 were effected, the question was raised whether the Governor of Bengal could replace the Lieutenant-Governor in the office of Rector without amendment of the Act; but no amendment was considered necessary, and therefore the Governor of Bengal has discharged the duties of Rector. The proposal that, as in the other Indian universities, the head of the province in which the University is situated should become the Chancellor will be discussed in the next chapter. We would, however, add at once that, in our opinion, to confine the Governor of Bengal merely to advisory functions in regard to an institution which plays so vital a part in the life of the Presidency, is a disadvantage to all concerned.

38. The Vice-Chancellor is appointed by the Governor-General in Council for a period of two years, but his tenure of office may be extended by that authority. In the absence of the Chancellor and of the Rector, he presides over Convocation and meetings of the Senate; and he is the Chairman of the Syndicate.

39. We are indebted to the late Vice-Chancellor, Sir Deva Prasad Sarbadhikari, for valuable information in regard to the duties which devolve upon the Vice-Chancellor. He showed how exacting these duties have now become owing to the growing volume and complexity of university business and to the length and frequency of the meetings of the Senate and Syndicate. The pressure of work has become so great that few men with other claims upon their time could possibly do more than keep themselves abreast of the details of the current business coming up for discussion at the bodies over which the Vice-Chancellor officially

presides. Some of our members spent several days in the University office and can testify to the mass of work which is thrown upon the Vice-Chancellor, even since he has been relieved of the responsibility for the organisation and control of the post-graduate classes.

40. Some of our correspondents have suggested that, in consequence of the growth of the work devolving upon the University, the time has come when the Vice-Chancellorship should be made a whole-time office and therefore necessarily a paid one. We recognise the success with which eminent men, though engaged in other avocations, have combined the work of Vice-Chancellor with outside duties, and are aware that the presence of a distinguished man discharging the duties of Vice-Chancellor in an honorary capacity has been a source of strength to the University. But our inquiry has led us to agree with those of our correspondents who feel that it has now become necessary that the chief responsible officer of the University should have time to keep in closer touch with the detailed work of the several boards and institutions which are embraced in the university organisation, to think out the great problems now confronting higher education in Bengal and to act from hour to hour as the link between the different parts of an organisation, already complicated and now needing further differentiation. We think that the time must soon come when, if the post continues to be honorary, the Government will be unable to find a man at once qualified and sufficiently leisured to discharge, in addition to other duties, those of the Vice-Chancellorship.

41. There are certain salaried officers of the University. The principal of these are the Registrar, the Inspector of Colleges, and the Controller of Examinations, all appointed by the Senate. The Registrar acts as secretary to the Senate and to the Syndicate and is responsible for the proper conduct of the administrative work of the University.

42. In the course of our inquiry we have given considerable attention to the organisation of the administrative offices of the University, and to the procedure followed in the transaction of university business. Dr. Brühl, at that time Registrar, gave evidence before us on these matters and furnished us at our request with a written statement showing the very numerous categories of work to which the Registrar of the University and his assistants

are required to attend.[1] In addition to this, a delegation from our number paid several visits to the office of the Registrar and with his assistance acquainted themselves with its general organisation and with its methods of dealing with records and correspondence.

43. What we have thus seen of the inner working of the mechanism of the University leads us to record our appreciation of the assiduity and patience with which Dr. Brühl discharged the responsible and intricate duties of the Registrar, and of the care given by him and by his assistants to the manifold details of the business committed to their charge. By permission of the Syndicate, we were allowed to make an extensive inquiry into the organisation of the Registrar's office and to inspect the files of documents bearing upon the particular cases which we selected for investigation. In any paper which came under our inspection, the précis prepared for the use of the Syndicate and Senate was accurately terse and gave a clear summary of the facts and issues upon which the university authorities had been called upon to reach a decision.

44. We found, however, that the work of the university office is done under unfavourable conditions. The arrangement of the rooms is inconvenient and unsatisfactory. Passages and a long flight of stairs, both of which are in practice open to strangers, separate the Registrar's room from the general office where the clerks work and the records are kept. No trained officer is in charge of the records. Delays in the production of papers are therefore not unusual. Dr. Brühl told us that occasionally he had to wait three days before a document was found. On other grounds it is undesirable that the Registrar should be so far removed from the work-rooms of the staff over which he has control. The clerks' offices are too accessible to the public. We learnt that it has become the practice, not perhaps unnaturally in the circumstances, but unwisely nevertheless, for members of the Senate to obtain on personal application confidential papers from the Registrar's subordinates without reference to the Registrar himself. That official's own office is used for the frequent meetings of the Syndicate and there is no accommodation for personal assistants in adjoining rooms. Thus, the present university offices have

[1] General Memoranda, page 394.

become unsuitable for their purposes, are inconveniently distributed, and inadequate in number and size. A re-arrangement, involving structural change, is advisable in order that the clerical work of the University may be organised more effectively and with more economical use of the time of the staff.

45. The staff is itself insufficient to cope with the present work of the University, especially at times of exceptional pressure which periodically recur. The office is disorganised by the heavy and urgent work of the examinations during several months in the year. At these times some relief might be given by the employment of temporary clerks. But the examination business is confidential and can be entrusted only to men in whom confidence may be reposed. Nor can the regular duties of the office be transferred at short notice to new comers unfamiliar with the technicalities involved. In fact the work of the University is of a nature which requires a permanent staff sufficiently large to deal with all the more responsible parts of the business at the times when the pressure is most severe. We have reason to fear that even in normal circumstances the office is shorthanded and that there is occasional delay in dealing with correspondence upon matters which require special investigation. Letters received by the University are not invariably acknowledged. The reasons for this practice are deficiency of staff and the desire to avoid expense. It is not deemed necessary to acknowledge cash remittances sent in payment of university fees, as these generally come from the mufassal by money order and in registered letters. The official correspondence, the whole of which is numbered and registered, is large, amounting to about 12,000 letters in the course of each year. Demi-official correspondence, which is similarly registered, is not included in this total.

46. It is at the head of the office that more highly skilled assistance seems to be needed. The Registrar is overburdened with detail which cannot be delegated to the existing staff. We do not allude here to the fact that he is required to sign with his own hand about 15,000 certificates every year, because it may be judged necessary that, as a proof of authenticity, each certificate should bear the signature of a high official written with his own hand. But a mass of other duties, which might be shared by responsible colleagues, occupy the Registrar's time, keep him too closely tied to his own room, and prevent him from dealing with difficult

matters which often arise unexpectedly and should receive immediate attention from him and from him alone. At present the time and thoughts of the most experienced and responsible of the university officers are absorbed too exclusively with business which should be distributed among others working under his direction and enjoying his full confidence. Whatever changes, however, may be made in the arrangement of the work, the duties of the Registrar must always be onerous in the highest degree. The more highly organised and active the University, the heavier the duties which must fall on the Registrar, and the greater the issues which must depend upon his wisdom, promptitude, insight and tact. It is because we anticipate a great development in the academic life of the University that we attach importance to a reorganisation and enlargement of the highest grades of its official staff. But even under the conditions which prevailed at the time of our visits, it was clear that the distribution of duties was imperfect and that the Registrar, in order to be able to deal with many matters falling within his personal province, needed further assistance and relief from some of the functions which he is now required to discharge. The diligence and self-denial with which Dr. Brühl endeavoured to keep abreast with university work may be gathered from the fact that, though his hours of daily duty in his office and at the University press were very long, he practically forewent all his holidays and was very frequently at his office till a late hour.

47. Throughout its existence the University has required an executive body, though no statutory authority was given to the Syndicate by the Act of 1857. At the first meeting of the Senate (January 3rd, 1857) antedating the passing of the Act by three weeks, it was resolved that—

> "Mr. Beadon, the Director of Public Instruction, Mr. Mullens, Lieutenant-Colonel Baker, Dr. Grant and Babu Ram Prasad Ray, together with the Vice-Chancellor, be appointed a provisional committee, with power to make such arrangement as may be required for the entrance examination, and for the transaction of the other necessary business of the University and also to frame the rules for the future Government of the University, such rules to be laid before the Senate for their approval; and that the committee have power to consult with the different Faculties, and

the Faculties have power to address the committee as occasion shall arise, touching such rules."

48. On June 6th, 1857, the Senate "finally resolved that the provisional committee be continued for the carrying on of the current business of the University." On September 5th of that year the Senate passed a revised by-law to the effect that "the executive government of the University shall be vested in a Syndicate consisting of the Vice-Chancellor and six of the Fellows, who shall be elected for one year by the several Faculties." This by-law, as it appeared in the first calendar of the University (1858-59), added that three of the members should be elected by the Faculty of Arts and one each by the Faculties of Law, Medicine and Engineering. The same body of by-laws provided that the Syndicate should from time to time frame such by-laws and regulations as were necessary, subject to the approval of the Senate, and that no question should be considered by the Senate which had not in the first instance been considered and decided on by the Syndicate. In 1884-85, the representatives of the Faculty of Arts were increased in number by two, and those of Law and Medicine by one each; so that the Syndicate comprised the Vice-Chancellor and ten members. There was no special provision for the inclusion of persons following the profession of education. No further changes were made until the Act of 1904.

49. The Universities Commission[1] of 1902 recommended that the Syndicate should be recognised by law as the executive authority of the University and that some of its powers should be exercised independently of the Senate. They expressed the view that it was undesirable that appointments made by the Syndicate, decisions in regard to the affiliation and disaffiliation of colleges, and exemptions from examination rules should be reviewed by the Senate. They held that the Syndicate should not be a large body and suggested nine as the minimum number of members and fifteen as the maximum; and they accepted "the principle that a committee which exercises such large executive powers as have always been, and must always be, entrusted to the Syndicate, should be truly representative of the colleges and the professional staffs by which the practical work of the University is carried on." The Commission

[1] Report, paras. 50-51, pages 11-13 and pages 55-59.

recommended that the Director of Public Instruction should be *ex-officio* a member and vice-chairman, and that the members of the Syndicate should be elected by the Senate "in certain proportions to represent the several Faculties; the representatives of each Faculty to include one or more heads or professors of colleges according to the following rule; where not more than two members of the Senate are elected to represent a Faculty, one at least shall be a college head or professor; where more than two are thus elected, a majority at least shall be college heads or professors in that Faculty." This rule, however, they stated emphatically, was "not intended to limit the proportion of the teaching element in the Syndicate." The Commission advocated this mode of college representation in preference to other suggestions put before them on the ground that the circumstances of the various universities in respect of the number and distribution of their colleges were so different that it did not seem possible to frame any simple system of college representation that would be applicable to all.

50. The regulations made under the Act of 1904 departed to some extent from the recommendations of the Commission. The Act itself provides that "the executive government of the University shall be vested in the Syndicate." This provision is embodied in the Regulations (Chapter IV, Section 1); but Chapter IV, Section 15, of the Regulations provides that "the decision of the Syndicate on any matter whatever may be brought before the Senate by any member of the Senate; and the Senate may approve, revise or modify any such decision, or may direct the Syndicate to review it."

51. A further examination of the Regulations shows that the powers of the Syndicate are of two kinds:—

(*a*) The more important matters of university business such as the institution and conferment of degrees, the making of regulations, the affiliation and disaffiliation of colleges, and indeed all matters not specifically reserved for the Syndicate under the Act, or regulations, must go before the Senate. In such matters the Syndicate prepares the business for the consideration and decision of the Senate.

(*b*) Chapter IV of the regulations reserves certain matters for the decision of the Syndicate, subject in all cases to

review by the Senate under the conditions stated above. These matters include (*i*) the administration of the funds and the keeping of the accounts of the University; (*ii*) questions relating to the recognition of, and withdrawal of recognition from, schools; (*iii*) the appointment of examiners and of certain other officers of the University as prescribed by the regulations; (*iv*) the making of rules for examinations in accordance with the regulations; (*v*) correspondence with Government and other authorities and persons; and (*vi*) the general conduct of the affairs of the University in accordance with the various instruments by which they are regulated.

52. The new regulations created a Syndicate consisting of the Vice-Chancellor, the Director of Public Instruction and fifteen ordinary Fellows elected for a period of one year as follows:—

4 by the Senate.
4 by the Faculty of Arts.
2 by the Faculty of Science.
2 by the Faculty of Law.
2 by the Faculty of Medicine.
1 by the Faculty of Engineering.

53. The Syndics elected by a Faculty must be Fellows belonging to that Faculty. Of the fifteen elected members at least seven must be either heads of or professors in colleges affiliated to the University, and of these two must be elected by the Senate, three by the Faculty of Arts, and one each by the Faculties of Science and Medicine; such Syndics up to the stated minimum must be elected first at any elective meeting. Under the regulations all members of the Syndicate must "ordinarily be resident in or near Calcutta."

54. The Syndicate appears, both as to its composition and the conditions of its work, the least satisfactory of all the university bodies. The duties of a Syndic are so exacting and so miscellaneous that the University is deprived of the help of many whose experience would specially qualify them to assist it in its executive work.

55. The Syndicate is not constituted upon the basis of sectional representation; but it is none the less to be regretted that among

its members the Musalmans are not represented, and have not been represented since 1904.

56. But it is the character of much of the business now submitted to the Syndicate which has caused us most surprise. The work of this small body of seventeen members, in whose hands is vested "the executive government of the University,"[1] is by no means confined to the determination of questions of principle and to the discussion of details in which a new question of principle is involved. It has been extended, whether by force of the university regulations or by practice, over a wide field of business, much of which might conveniently be entrusted to other and more appropriate bodies. Under the Act of 1904, the Syndicate has to consider every application requesting permission to appear at a university examination as a 'non-collegiate candidate'. Requests made on behalf of school boys and school girls for leave to alter the dates given in the entries of their birth come before the Syndicate for review and discussion. The Syndicate's attention is occupied even with points as minute as those raised in the following agendum which we quote from an agenda paper containing several others of a similar kind.[2]

"A memorandum from the Inspector of Schools, Dacca Division, forwarding an application from Babu S. S. requesting that the break in the period of study of his brother K. S. who, after being unsuccessful at the matriculation examination in 1917, could not join the J. High English School earlier than 2nd December 1917 owing to the delay involved in obtaining a duplicate fee receipt, may be condoned so as to enable him to proceed to the next matriculation examination as a regular student."

We recognise the importance of keeping on behalf of the University a watchful supervision over the observance of the rules as to continuity of study and age-limits of entry to examinations, and are aware that the present regulations require the Syndicate to exercise that supervision and entrust to it alone the power of giving a reasonable interpretation to the rules. But it seems nevertheless desirable that details of this kind should be dealt with by a responsible committee on applications, entrusted with a reasonable degree of discretionary power.

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[1] University Regulations, Chapter IV, 1.

[2] We are glad to hear that steps have recently been taken to classify the agenda under appropriate heads.

57. In present circumstances, items of business from the consideration of which a body such as the Syndicate should be relieved appear on the agenda paper (partly no doubt owing to the pressure under which it has to be prepared), intermixed with matters of great importance requiring the fullest and most careful attention. At a meeting, for example, a letter from the Secretary to the Government of Bengal, asking that the Legislative Council might be supplied with the opinions of the University on certain clauses of an important Bill appeared on the order paper between an application from a candidate whose appearance at an examination had been prevented by illness and a request from a secondary school for the continuance of provisional recognition for another year. It appears to us that the questions involved in the two last named items, and especially in the second of them, call rather for the consideration of well-informed special bodies able to give continuous attention to such matters than for that of the highest executive authority whose judgment must be somewhat distracted by a medley of business, the detailed discussion of which would make too great a claim upon its time. More than half of the present business of the Syndicate arises, we were told, from the conduct of the matriculation examination and the recognition of schools. Important as are these departments of business, they would be more appropriately dealt with by special boards.

58. So multitudinous are the matters of detail which come before the Syndicate that it is obliged to give to questions of general policy less attention than they deserve. Dr. Brühl, in reply to a question from us, stated in his oral evidence that the volume of work is so large that there is no body of people within the University which concentrates its attention on questions of broad policy. Throughout the year, except in the month of the Puja holidays, the Syndicate has to meet at least once a week. In one year it held as many as 55 meetings. The latter are prolonged and occupy on each occasion from at least two to four hours. So protracted are the individual meetings and so miscellaneous the business that, under the present conditions, it would be unreasonable to expect men with other heavy claims on their time to give full attendance at the meetings of such a body. The University is thus virtually deprived of the benefit which it would derive from the presence of two or three representative leaders of commerce and industry at its council board. In the consideration of

questions of public policy the University should be assisted by their practical judgment and wide knowledge of affairs. Their interest in the work of a university might open new careers to many students of promise. Their knowledge of its needs would dispose them to appeal in the right quarters for increased financial support; and their experience would be of special value in the development of new technological departments and in all other endeavours to adjust some of the academic courses more closely to the needs of practical life.

59. But, in spite of the time given by the hard-worked members of the Syndicate, the present arrangements for the conduct of the administrative business of the University do not effectively secure concentration of responsibility in the hands of that body. The existing system concentrates in a so-called executive the work rather of discussion than of deliberate decision. The Syndicate is overburdened with duties, many of which might with advantage be delegated or transferred to other bodies. The task for the discharge of which it appears to have been especially designed is executive control; even for this task it is in a great degree disabled by the pressure of miscellaneous details upon its thoughts and time. This pressure leads to congestion in university business and to delay. Nor is it easy for any member of the Syndicate, except the Vice-Chancellor, to see its work in just perspective. The order paper for each meeting is swollen at the last moment by supplementary agenda in which questions of great importance may find an unexpected place. The minutes of one meeting have very frequently not been circulated among the members before the next meeting is held. Thus it may happen that, though any such business would, we understand, be postponed at the request of a member, decisions have to be taken upon matters for which members have come unprepared; and any of the members may miss an opportunity of intervening upon a question in which he takes special interest unless he attends the whole of every meeting at a great (and, in the case of men otherwise pressed by business, impossible) expenditure of time.

60. Our inquiry therefore leads us to believe that the interests of the University would be better served and that the intentions of those who framed the present regulations would be more effectively fulfilled by a systematic re-distribution and re-classification

of university business, and by the assignment of different categories of its work to various bodies and officers according to the character of the questions concerned. The chief distinction might be drawn between matters mainly educational (including admission to a particular examination) and matters mainly administrative and financial. Each of these main divisions of business would fall into sub-divisions and these might conveniently be assigned to bodies formed appropriately for the purpose. Over each of the two main categories of business one authoritative body should exercise general supervision, reserving to itself the determination of new questions of principle. And of these two authoritative bodies, the one educational, the other mainly administrative, the latter should bear the responsibility of ultimate decision of all matters which, though in part educational, involve points of public administrative policy or of finance.

61. Should our proposals in regard to the reconstitution of the University be carried into effect, the University will enjoy the advice and assistance of experienced business men whose judgment will be of greatest value in regard to the organisation of the university office as well as in many other ways. Just as it is impossible to draw a sharp line of distinction in university business between educational and administrative problems—the categories being in some of their aspects interfused—so is it impossible successfully to organise a university office on the pattern of that of an ordinary business house, because regard must be had for the special conditions imposed by the educational character of the institution which it serves. Our inquiry however has led us to the conclusion that the chief remedy for the present congestion and delay will be found in a reconsideration of the functions of the university executive and in a re-distribution of its duties and powers; and, further, that the effective discharge of the administrative business of the University will call for new and more conveniently organised offices and for a considerable strengthening, especially in its higher grades, of the administrative and clerical staff.

IV.—Academic organisation.

62. Another serious defect in the organisation of the University is the absence of any authoritative direction by a body of scholars.

Under the new regulations of 1906 the number of Faculties in the University was increased from four to five by the splitting up of the Faculty of Arts into those of Arts and Science. There are now Faculties of Arts, Science, Law, Medicine and Engineering. The Act of 1904 (Section 14) permits the Senate to add new Faculties or to abolish or to reconstitute existing Faculties by regulation. It lays down that Fellows shall be assigned by order of the Senate to different Faculties and that those Faculties may add other than Fellows to their number (under certain restrictions), provided that those so added do not exceed half the number of Fellows assigned to that Faculty. These added members have the right to take part in the ordinary business of the Faculty and in the election of an ordinary Fellow by the Faculty, but not in elections to the Syndicate. They are themselves eligible for election by the Faculty to a Board of Studies. At the time when we began our enquiry, the Faculty of Arts comprised the Dean and 56 members; the Faculty of Science comprised the Dean, 15 members, and 5 added members; the Faculty of Law comprised the Dean and 21 members; the Faculty of Medicine comprised the Dean and 13 members; and the Faculty of Engineering comprised the Dean, 6 members, and 3 added members. The chief function of a Faculty is to consider and report on all matters referred to it by the Syndicate or by the Senate. It may also make recommendations to the Syndicate on all matters relating to the organisation of university examinations, teaching, and research in the studies or subjects with which it is concerned, and may propose regulations regarding these matters for the consideration of the Syndicate. The Senate and the Syndicate have each power to order joint meetings of Faculties to consider questions affecting more than one Faculty.

63. A series of twenty-two Boards of Studies were created not by the Act but by the regulations (Chapter V). Each Board deals with a particular branch of study and is appointed by the Faculty within whose purview this branch is included, the four Boards of experimental psychology, mathematics, geography and teaching being elected, in conformity with this general principle, by the Faculties of Arts and Science jointly. The Boards are elected annually and consist of 'teachers of, or examiners in,' or other persons who have a special knowledge of the subject or subjects with which the Board is concerned.

64. The functions of a Board of Studies, like those of a Faculty, are advisory. It is its duty to recommend courses of study, text-books and the names of persons competent to act as examiners in respect of subjects within its purview. It is required to consider reports of examiners referred to it by the Syndicate and to frame such recommendations regarding the methods of teaching, study and examination, as may seem necessary in the interests of education. It has also to consider any other matter referred to it by the Senate, Syndicate or a Faculty. The Senate and the Syndicate may order joint meetings of two or more Boards to consider matters affecting more than one Board.

65. An inspection of the composition of the existing Faculties and Boards of Studies shows that many of them cannot, at present, be regarded as expert bodies. In the case of the Faculties, the regulations provide that a member of the Senate may belong to one or two of the Faculties but that he need not necessarily belong to any. It is clear that it may be much to the interests of the University to have on the Senate a certain number of Fellows who are extremely useful in discussing questions of general policy but who are out of place on any particular expert academic body. But it has been the practice of the University to assign each Fellow to at least one Faculty, and it would probably be regarded as a slight not to do so in a particular case in spite of the terms of the regulations. Under these conditions some of the Faculties are not sufficiently homogeneous and have not therefore been very successful in discussing matters such as university curricula. Again, the Boards of Studies are, in certain cases, composed largely of persons who cannot be regarded as experts in the subject for which the Board is constituted. Not only do these Boards include many persons who are not specialists of the subjects within the purview of the Boards, but many experienced teachers do not find places on them.

V.—Supervision of the colleges.

66. An examination of the control exercised by the University over its colleges will show to what extent the work as a whole is hampered by the defects in organisation which have just been discussed. It is unnecessary at this stage to consider the conduct of the university classes, as the constitution and working of the new post-graduate authorities have been dealt with in a separate

chapter[1]. We shall confine ourselves therefore to the undergraduate teaching. The control over the affiliated colleges is exercised mainly by the affiliation and disaffiliation of colleges, by inspection, by the prescription of courses and by examination.

67. The arrangements for affiliation and disaffiliation were very loosely defined under the Act of 1857. The only requirement was that, except by the special order of the Syndicate, no person should be admitted as a candidate to the degree of bachelor, master, licentiate or doctor without presenting a certificate from one of the institutions authorised in that behalf by the Governor-General in Council to the effect that he had completed the course of instruction prescribed. Nothing was laid down in the Act regarding the procedure for authorisation (or affiliation as it was afterwards called) or the means of securing that the college maintained an adequate standard.

68. The Universities Commission[2] of 1902 observed that there was no attempt in the Act of Incorporation to give precision to the term affiliation or to define the relation between the University and the colleges. They therefore recommended that no institution should be admitted to affiliation except on the fullest information and that no institution, once admitted, should be permitted to fall below the standard of efficiency required for affiliation. They made suggestions regarding the conditions of affiliation and proposed that affiliation should be granted not in general terms but with a more exact reference to the subjects and courses of study for which the colleges could make adequate provision. They regarded 'adequate provision' as covering not only the provision of an adequate number of lectures but also 'adequate tutorial assistance' and access to a library and laboratories where required. The object which the Commission had in view was that, before entering for a university examination, a student should have completed a regular course of study in an institution approved by the University. They deprecated rigid regulations and recommended that all rules requiring merely a percentage of attendance at lectures should be recast or abolished. They also recommended that the decisions of the Syndicate in regard to the

[1] Chapter XV.

[2] Report, paras. 57-60.

affiliation and disaffiliation of colleges should not be liable to revision by the Senate.

69. Sir Gooroo Dass Banerjee, however, felt that disaffiliation might affect vested interests, not only of the college concerned but also of its students, and recommended in his note of dissent that the orders of the Syndicate in regard to disaffiliation should be liable to revision by the Senate.

70. The Act of 1904 deals in great detail with the question of affiliation, and the regulations under the Act carry the matter into further detail.

71. Under the Act, Section 19, except on the recommendation of the Syndicate and by special order of the Senate, no person can be admitted as a candidate at any university examination other than matriculation, unless he produces a certificate from a college affiliated to the University showing that he has completed the course of instruction prescribed by regulation. It is therefore essential for every college, the pupils of which desire a degree, to be affiliated to the University.

72. To obtain affiliation the college applying must under the Act (Section 21) 'satisfy the Syndicate' in regard to a number of matters (which have been added to under the regulations, Chapter XIX) and which include (i) its management by a regularly constituted body; (ii) the suitability of the qualifications of its teaching staff and the conditions of their tenure of office to ensure the due provision for the courses to be undertaken by the college; (iii) its buildings, the regulations for the residence of students, and for their supervision and physical welfare; (iv) the provision for a library; (v) the equipment for the teaching of any experimental science in which affiliation is sought; (vi) the residential arrangements for the head of the college, and of some members of the staff, in or near the college or the place provided for the residence of students; (vii) the adequacy of the financial resources of the college for its continued maintenance.

73. Under the regulations (Chapter XIX, Section 5) the Syndicate is required to obtain from a college applying for affiliation an assurance that, except with the special permission of the Syndicate, no professor or lecturer will be allowed to lecture to a class or section of a class which has on its rolls more than 150 students. The Act further provides that it must also satisfy the Syndicate that the

affiliation of the college, having regard to the provision made for students by other colleges in the same neighbourhood, will not be injurious to the interests of education or discipline and that the college rules fixing the fees have not been so framed as to involve such competition with any existing college in the same neighbourhood as would be injurious to the interests of education. The Syndicate is required to make a local enquiry and any other enquiry that appears to them necessary and to report to the Senate who may make a further enquiry and who then record their opinions on the application. All the proceedings of the Syndicate and Senate are then submitted to the Government of India, who, after such further enquiry as may appear to them necessary, grant or refuse the application or any part thereof.

74. A college may from time to time apply for additions to the courses of instruction in which it is affiliated, the procedure followed being the same as that already described.

75. Under the terms of the Act the procedure for disaffiliation is initiated by a written motion by a member of the Syndicate accompanied by a statement in writing of the grounds on which the motion is made. The statement is then forwarded to the head of the college concerned who is given an opportunity of making a representation in writing before the matter is considered by the Syndicate ; and the motion is not considered until the representation has been made or the time allowed for its submission has expired. The procedure followed is then identical with that followed in the case of an application for affiliation, except that the Syndicate are not obliged to make an inspection unless they consider it necessary. As in the case of affiliation the final decision rests with the Government of India.

76. It must be pointed out that it is unusual in university administration to throw the disagreeable onus of initiating proceedings of this kind on a single individual, and we think it inadvisable. The responsibility for such action should rest on a committee of the Syndicate, or of such body as may be charged in future with dealing with the questions of affiliation or disaffiliation or of admitting to university privileges of this kind and of deciding that such privileges should lapse in particular cases.

77. The Universities Commission recommended that rules should be so framed that no institution, once admitted, should be allowed

to fall below the standard required for affiliation, and that the Syndicate should satisfy itself from time to time on this point. They thought that in most cases information would be procurable from the Director of Public Instruction and that it would not be necessary for the University to appoint an Inspector or Board of Inspectors but that members of the Syndicate should make it a practice to visit colleges within their jurisdiction. They suggested that such visits would serve to remind the authorities and the students of each college that they formed part of the larger world of the University, and would also furnish the Syndicate with a large body of experience which would be of great value when questions concerning the college came up for decision. They recommended that the Syndicate should have power to order the formal inspection of a college at any time.

78. The Act of 1904 went much further in this direction than the recommendations of the Commission. It provided that every college affiliated to the University should submit such report, returns and other information as the Syndicate might require to enable it to judge of its efficiency; that the Syndicate should cause a college to be inspected from time to time by one or more competent persons authorised to act on its behalf; and that the Syndicate might call upon a college so inspected to take, within a specified period, such action as appeared necessary to maintain its efficiency in respect of those matters with regard to which the Syndicate has to be satisfied when it deals with an affiliation in the first instance. The Regulations (Chapter VIII) provide for the appointment of an Inspector of Colleges; and also (Chapter XX) for the inspection of each affiliated college at least once a year, such inspection to be conducted by the Inspector of Colleges and one or two other persons appointed from time to time by the Syndicate. The inspectors are instructed to deal with:—

(*a*) The constitution of the Governing Body and the names of its members.

(*b*) The suitability of the buildings and their neighbourhood, the accommodation for the students in attendance, the furniture, the lighting, the ventilation of the rooms, the drainage of the surrounding premises, and the efficiency of the sanitary arrangements.

(*c*) The names and qualifications of the teaching staff, the conditions governing their appointment and tenure of office, and the changes in the staff during the preceding year.

(*d*) The provision made for the residence of the head of the college and of the members of the teaching staff in or near the college, or the place provided for the residence of students.

(*e*) The adequacy of the library, scientific apparatus and other teaching appliances.

(*f*) The courses of study, the subjects taught, the number of lectures delivered in each subject, the routine of work, and the arrangements for exercises and for tutorial assistance, and the facilities given to students to make use of the library.

(*g*) The adequacy of the teaching staff.

(*h*) The strictness with which the college registers are kept and the transfer rules observed.

(*i*) The average monthly roll-number and the daily attendance of students during the last twelve months, as compared with the previous year's.

(*j*) The results of university examinations.

(*k*) The state of discipline.

(*l*) The provision made for physical exercise.

(*m*) College clubs and other institutions for fostering collegiate life.

(*n*) The extent and character of hostel accommodation, the degree of efficiency attained in the supervision of hostels and other lodgings for students; and the distance of such hostels and lodgings from the college premises.

79. There can be little doubt that considerable improvements have been made in the organisation of colleges since the time of the Universities Act, but this tightening up of efficiency has scarcely kept pace with the very great increase in numbers, which has exposed many of the weaknesses of the present system.

80. The regulations as they appear in the Calendar seem to us excellent. But we have reason to think that they are far less effective than might appear at first sight. We have read many inspection reports and can testify to their useful, and sometimes admirable, suggestions. It is all the more disquieting therefore to record that in the case of certain colleges the same criticism appears from year to year but that no action whatever is taken. One of the weaknesses of the previous system was pointed out by the Commission of 1902 who directed attention to the fact that cases had been brought before them of colleges which had obtained affiliation on a statement showing adequate strength in the teaching staff, but which had lost some of their best professors and filled their places with less satisfactory teachers.[1] The process goes on now as it did before 1902. But what can the Syndicate do? It can disaffiliate the college in the subject in which the weakness has arisen. Suppose affiliation is granted on the ground that there are 250 students taking a subject and there are four efficient teachers. The number of students in the subject rises to 400; neither the teaching strength

[1] Report, page 14.

nor the accommodation is increased. Is the college to be disaffiliated? Of the four efficient teachers, one is replaced by a less efficient teacher; and then a second by another less efficient teacher. Is the college to be disaffiliated? What provision is to be made so that the students (half of whom may be studying under the two efficient teachers) shall not suffer? The weapon of disaffiliation in its present form is so drastic that the University has never ventured to use it.

81. But the failure of the power of disaffiliation to secure a more satisfactory standard of all-round educational efficiency in the weaker colleges has not been due alone to the difficulty of enforcing that power without inflicting a penalty disproportionately serious in its effect upon the interests of the students and perhaps heavier than the shortcomings of the college deserve. If (in some such way as is proposed in later chapters of this report) the University had been in a position to offer or to recommend a grant-in-aid to a college towards the cost of improvements in the quality and character of its work, the Syndicate would probably have been much less indisposed to exert pressure by the threat of disaffiliation and much more successful in securing compliance with the recommendations made in its inspectors' reports.

82. Apart from this, however, the University has few means of influencing and co-ordinating the educational expenditure of the colleges. Without such influence and co-ordination there can be no adequate husbanding of existing resources for higher education and using them to their best effect. Its own funds depend too largely on examination fees. The ordinary Government maintenance grants are given to colleges without reference to the university authorities. The University has not in practice been able to ensure for the college teachers adequate salaries and reasonable security of tenure; nor has it been able in all cases to insist that all the financial resources of a college should be used for educational purposes and not for private gain.

83. Our attention has been directed to a practice which is said to press hardly on the colleges in certain cases. Difficulties are made in granting affiliation to a college in both Persian and Arabic if the same teacher has charge of the two departments even though the total number of students may be less than a dozen. Mr. Jamal of Rangoon and certain witnesses at Chittagong protested against

this practice which appears to us unreasonable, though the general principle that university teachers should not be required to deal with a multiplicity of subjects is sound on the whole. It is clear that some latitude should be allowed in dealing with subjects for which the number of students is small and with institutions, like the women's colleges, in which the whole number of students is, under existing conditions, necessarily small. The case of the women's colleges has been brought to our notice by Sister Mary Victoria, Principal of the Diocesan College, Calcutta.

VI.—Essentials of University organisation.

84. Being a corporation of learning which exists for the service of the community, a university needs for its effective governance organs of three types. In the first place, it requires a body to keep it in touch with all the varied requirements of the community. Spokesmen of the community must have the means of expressing its needs, though they may not know how far their demands are germane to university work, nor how they can be realised, nor their relative importance. Such a body should be advisory, critical and stimulating, but not in detail controlling; for in so far as it is genuinely representative of the community, it will not be, nor ought it to pretend to be, an expert body, but rather a body which makes its demands on the experts, and asks them, if the demands cannot be met, the reason why. Its primary duty, therefore, is to make known the needs of a variety of interests, and to assist the university to be, as it should, a national institution. In the second place, a university needs statesmanlike guidance in the accommodation of means to ends and also in the provision of means; and not less in mediation between the possible misconceptions of the public and the possibly too restricted outlook of the scholar. Thirdly, and above all, a university needs, just because it is a corporation of learning, the authoritative direction of a body of scholars. Here is the real heart of the university. The other elements may be, and have been, dispensed with, though not without loss; this cannot be dispensed with without sacrificing the essential character of a university.

85. The University of Calcutta under its present constitution possesses none of these three organs in a form well-adapted even to existing needs, still less in a shape capable of bearing the strain of the more exacting requirements which are certain to show them-

selves in the early future. The Senate is not sufficiently representative of the life and interest of Bengal; the Syndicate has not the responsibilities and powers which should devolve upon the Executive Council of a great university: and the teaching body has a quite inadequate voice in the direction of academic affairs. The time has come for a reconstruction which will remedy these defects.

VII.—New departures in Indian university organisation.

86. How widespread is the feeling that great changes are needed in university organisation in India is shown by the fact that in the constitution of the three most recent universities—Benares, Mysore and Patna—there have been notable departures from the pattern of which the existing constitution of Calcutta University may be taken as the type. In all cases an attempt has been made to give to the teaching body a larger voice in the direction of academic policy.

87. The University of Mysore is very similar in its constitution to the older Indian universities, having a Senate of not less than fifty and not more than sixty members; but it departs from existing practice by giving seats on the Senate to the university professors *ex-officio*.

88. At Patna the application of the elective principle has been extended, by increasing both the proportion of elected Fellows and the categories of electing bodies. Of the total number of ordinary Fellows (not less than 60 and not more than 75) fifty are elected, while not less than ten and not more than twenty-five may be nominated by the Chancellor. The Senate includes elected representatives not only of the graduates but of the teaching staffs of the colleges, the graduate teachers of recognised schools, and certain associations or public bodies selected by the Chancellor. Further, all colleges admitted to the University and giving teaching up to the degree standard are given statutory representation on the Senate in the persons of their principals, who are *ex-officio* Fellows. The Syndicate of the Patna University is very largely an expert body, and the principals of Patna College and of Ravenshaw College, Cuttack, are *ex-officio* members. Its orders are normally subject to revision by the Senate; but in certain matters of academic importance it is the ultimate authority, except that any six of its members have the power to refer such matters to the Senate for review.

89. In the constitution of the Hindu University, Benares, several departures were made in the redistribution of functions. A dividing line was made between administrative matters, entrusted to a large body called the Court, with an executive committee called the Council,[1] and academic matters, entrusted primarily to a Senate, with an executive called the Syndicate. The Court which is the supreme governing body, besides its administrative powers, has the right to review the acts of the Senate, save where the Senate has acted in accordance with powers conferred on it by the Act, Statutes and Regulations; and the Court exercises all powers of the University not otherwise provided for by the Act or Statutes. The Court consists of three classes of persons; (1) *ex-officio* members, (2) donors and their representatives and (3) elected members. The elected members include 10 persons elected by the graduates, 30 elected by the donors, 10 elected by the Senate and 35 elected by the Court to represent special categories of experience or special communities (the Sikh and Jain) and not more than 20 elected without such limitation. The Senate of the Benares University has the "entire charge of the organisation of instruction in the University and the colleges, the courses of study, and the examination and discipline of students and the conferment of ordinary and honorary degrees." The Syndicate consists of 17 members, of whom 10 at least, other than *ex-officio* members, are university professors or principals or professors of colleges. The Syndicate exercises such powers as are vested in it by the Statutes.

[1] It should be noted, however, that the Council includes representatives of the Senate.

CHAPTER XXVIII.

The Relations between Government and the University.

I.—The extent of Government control.

1. A careful analysis of the relations between Government (including under this general term both the Imperial and the provincial administrations) and the whole system of education of which the University is the crown, is an essential element in our survey. For these relations are more intimate and more complex than is the case in most other countries, just because, since the very beginning of the development of western education in India, its ultimate guidance and control have been largely in the hands of Government, and the directions which its development has followed have been in a great degree due to the policy and acts of Government.

2. In the first place, the provincial universities[1] of India were all established by Government action; and they were established partly in order that they might exercise, on behalf of Government, certain functions of regulation and control over colleges and schools within their allotted areas. For that reason they have been, from the first, not independent corporations of learning, but bodies mainly nominated by Government, wielding defined powers which were delegated to them, and subject to constant supervision by Government. The chief officer of each university, the Chancellor, is in all cases the head of a Government, Imperial or local, and he exercises far larger powers than the chancellors of western universities. The great majority of the members of the supreme governing bodies, or Senates, in all the universities, have always been nominated by the Chancellor, and even those among them who are elected, under the terms of the Act of 1904, must be approved by the Chancellor. All the regulations of every univer-

[1] The term 'provincial universities' is used to distinguish the group to which Calcutta belongs (the others being Madras, Bombay, the Punjab, Allahabad, and since 1917, Patna), and which are intended to serve the needs of whole provinces, from other universities of a different type, like Benares, which have either been created or are projected.

sity are in form, and largely in fact, Government enactments. All the more important officers of the University are either (like the Vice-Chancellor) directly appointed by Government, or (like professors and lecturers) are subject to its approval.

3. In the second place, Government supplies the bulk of the funds required for the conduct of university work, other than that supplied by the fees of students for instruction and examination. Of the total non-fee revenue of the University of Calcutta, in 1916-17 Rs. 1,36,800, or 51·6 *per cent*, comes from endowments, Rs. 1,28,000, or 48·4 *per cent*, from Government grants. But of the total non-fee revenue of all the teaching institutions of university rank in Bengal other than the University itself (including professional as well as arts colleges), Rs. 1,78,639, or only 13 *per cent*, comes from endowments and other sources, no less than Rs. 11,81,956, or 87 *per cent*, from Government grants. In the main, apart from fees, the system of university education in Bengal is paid for, as well as ultimately regulated and controlled, by Government: and this is broadly true also of other provinces. If fees —both for teaching and for examination—be included, the total revenue of the University and all the colleges in Bengal, taken together, amounts to Rs. 38,06,456. Of this total the university fees account for Rs. 7,91,600, the college fees for Rs. 13,89,461. But Rs. 1,63,755 of this fee-revenue is really paid by Government, in the form of scholarships. The total contribution of the Imperial and provincial Governments to university education therefore amounts to Rs. 14,73,711, or 39 *per cent* of the whole; the total contribution from endowments and other sources to Rs. 3,15,439, or only 8·2 *per cent*; the total contribution from fees to Rs. 20,17,306, or 52·8 *per cent*. It thus appears that Government supplies between one-third and one-half of the total cost of university education in Bengal.

4. In the third place, the character and equipment of the teaching institutions which prepare students for university examinations are in the main determined by Government; not only because Government approves the conditions for the affiliation of colleges, and is the final authority for the decision of all applications for affiliation, but still more because Government, for several of the most important colleges, professional and general, defines the staff and equipment and actually provides the teachers—retaining

them under its own direct orders. It thus sets a pattern which is, in a large degree, followed by the rest; while, by means of the conditions which it attaches to its grants-in-aid, it holds also a certain control over the methods of many of the other colleges.

5. In the fourth place, Government provides subsidies for secondary education, and, through its provincial Departments of Public Instruction, supplies the only existing mechanism of inspection both for secondary and for primary education; while its local executive officers play a very important part in the local management of colleges and schools. But in the secondary sphere its activities are in many ways qualified and limited by the function of recognising and examining high schools exercised by the University; so that in this sphere there is a confusion of jurisdiction from which frictions and delays arise.

6. Lastly, not the least powerful factor in the influence exercised by Government over the university system arises from the fact that a large proportion of the students who undertake courses do so in the hope of obtaining admission to Government service, for which, even in its humbler branches, a university degree, or success in a lower university examination, is, for Indian candidates, a required qualification. In the eyes of many university students, and of the public, the university system is still largely regarded simply as the accepted mode of approach to Government service; and this has had profound effects upon the character and development of the system.

7. It is thus, in theory, an extremely close control which is exercised by Government, directly and indirectly, over the working of the university system; and we propose in this chapter to analyse carefully the mode in which this control is used, and the various criticisms which have been made upon it. Among the most fundamentally important questions with which we have to deal are the questions whether this control is too rigid, whether the purposes for which it is maintained could be better met in other ways, and, if so, what changes are desirable. But these questions can only be dealt with when the existing system has been fully explored.

8. Among the questions included in our questionnaire was one which asked for the opinions of our correspondents regarding the proper relations between the Government of India and the provin-

cial Government on the one hand, and the university or universities of a province such as Bengal on the other.[1] To our surprise, it was one of the questions which produced the least adequate response, and gave us the minimum of guidance. Only 158 of our correspondents dealt with the question at all. Most of the answers are extremely brief and perfunctory. Few show any understanding of the way in which the existing system works, and fewer still attempt to work out clearly or fully a new kind of relationship. Eighteen of the answers are so vague in their terms that it is impossible to tell whether the writers are satisfied or dissatisfied with the existing system. Three writers—all Indians—express the desire that the control of Government should be materially strengthened. Thirty-seven are, in general, content with the degree and character of the control now exercised by Government, though many of them desire to see most of the powers of the Imperial Government transferred to the provincial Government. Ninety-nine advocate a diminution of Government control, and an increase of university autonomy; but there is considerable variation among these writers as to the extent and character of the changes which they would desire. With few exceptions, however, our correspondents admit the necessity of some Government supervision over university policy. Those who wish to make the universities entirely autonomous are in a small minority.

II.—The Government of India and the Government of Bengal.

9. We have hitherto spoken of 'Government' in general terms, without differentiating between the functions exercised by the Imperial Government and those exercised by the provincial Government. But the distinction is of the greatest importance, especially in Calcutta; for the most marked difference between the University of Calcutta and the other Indian universities of the affiliating type is that in regard to the University the Viceroy and the Government of India perform functions which in all other cases are performed by the Governor (or Lieutenant-Governor) and the provincial Government.

10. In the original Acts by which the Indian universities were established, and in the Universities Act of 1904 by which the action of Government in regard to universities is now mainly

[1] Question 14.

determined, certain functions (such as the nominations of members of the Senate) are attributed to the 'Chancellor'. certain other functions (such as the approval of regulations and the final decision as to the affiliation and disaffiliation of colleges) are attributed to the 'Government.' In all the five original universities except Calcutta the 'Chancellor' is the Governor (or Lieutenant-Governor) of the province in which the university is situated, the 'Government' is the provincial Government. In Calcutta the 'Chancellor' is the Governor-General of India, and the 'Government' is the Government of India.

11. With the affairs of Calcutta University the Government of Bengal has, as such, nothing to do. The Governor of Bengal holds the office of Rector of the University, but he has no defined functions,[1] save that of being the medium of communication between the University and the Government of India: he may, if he thinks fit, offer his opinions upon the recommendations which he forwards. On the other hand, it is the Government of Bengal which controls Government colleges, aids and inspects secondary schools, and provides the University with materials for deciding upon the applications of schools for recognition. In other provinces these functions are combined with the exercise of control over the University.

12. One justification for Government control over the working of a university is the fact that (under Indian conditions) the action of the University directly and immediately affects the other grades of education, especially the secondary grade. Another is the desirability of considering the provision of training for university degrees, and therefore the organisation and equipment of the colleges, in conjunction with the schemes of study on which these degrees are granted. In Bengal these justifications have not the same force; because the Government which controls the University is different from the Government which defines the policy of the State in regard to secondary education, and which provides some, and aids others, of the colleges which give training for university degrees. Assuming that the existing system of close Government control is necessary, this division of responsibility and power between two authorities 1,000 miles apart seems illogical, likely

[1] Clause 18 of the Act of 1904 empowers the Chancellor to delegate any of his functions to the Rector, but no such delegation has ever been made.

to lead to confusion and delay, and apt to make the exercise of the control ineffective.

"It seems to me that there is a general principle involved", said Mr. J. G. Cumming, when this question was discussed in the Imperial Legislative Council on 22nd March 1916; "and that principle is a well-known one in administration. Where there is responsibility, there should be authority; and in fact power or authority cannot be divorced from responsibility without serious consequences . . . Since the Government of India have moved from their former headquarters in Calcutta, the position of the Government of Bengal is such that it has a responsibility of which it cannot divest itself."

13. The special relation of the Government of India to the University of Calcutta is due to the fact that the jurisdiction of the University of Calcutta originally extended over the whole of India except the Presidencies of Madras and Bombay; and to the further fact that, until 1911, Calcutta was the seat of the Imperial Government. But the creation of new provincial universities,[1] followed by the removal of the seat of Imperial Government to Delhi, changed these conditions. The University of Calcutta had now become, in the main, a provincial and local, rather than a general Imperial, university. At the same time the Governor-General and his officers had ceased to possess that intimate contact with the conditions of Bengal which was necessary to enable them to use to the best advantage the power of selecting men to fill university offices, or to judge as to the needs and conditions of a college applying for affiliation. This drawback was clearly recognised by His Excellency the Viceroy, in his convocation address at Calcutta in January 1917. "Since I assumed office," he said, "I have been very conscious of the grave inconvenience of the distance which separates the University from its Chancellor and the Government of India. It is impossible for us to have that close and intimate knowledge of your affairs which only residence on the spot can give."

14. Another unfortunate consequence follows. If it be admitted —and it is often urged—that the main reason for the presence of official members upon the governing bodies of the University is that they may represent and expound the educational policy of Government, it would seem to be necessary that the official members should

[1] The Punjab in 1882, Allahabad in 1887, Patna in 1917. Benares is, of course, not a 'provincial university'.

represent the Government which frames the policy that has to be expounded, and should share in the responsibility for its execution. But the Government responsible for university policy in Calcutta, though not for other branches of educational policy in Bengal, is the Government of India; and its educational officers cannot be expected to travel 1,000 miles and back even once a month in order to take part in meetings of the Calcutta University. The effective official members of the Syndicate and Senate are, in fact, officers of the Government of Bengal, who may have no adequate knowledge of the policy they are called upon to explain. This especially applies to the Director of Public Instruction, who, though he is purely a provincial officer, is always a member of the University Syndicate, and must be regarded as the spokesman of the Government point of view. This state of things must inevitably tend to reduce to ineffectiveness the system of Government control.

15. In actual fact, of course, it is impossible that the Education Department of the Government of India should disregard, or fail to consult, the provincial Government on questions so nearly affecting its policy—questions on which, moreover, it alone can often supply the information necessary for a wise decision. But the discussion of details by correspondence at a distance of 1,000 miles cannot possibly be satisfactory. At the worst it may lead to misunderstandings; at the best it must often cause exasperating delays[1] in the settlement of questions which could quite easily be decided immediately.

16. These considerations have led to a demand that the Government of India should transfer to the Government of Bengal its functions in relation to the University of Calcutta. The most important discussion on this question took place in the Imperial Legislative Council on 22nd March 1916, when Mr. Surendranath Banerjea moved:—

* "That this Council recommends to the Governor-General in Council to consider the advisability of placing the University of Calcutta on the same footing with the Universities of Madras and Bombay in respect of the relations between the Calcutta University and the head of the local Government for purposes of administration and control."

[1] See the memorandum of the Engineering College, Sibpur, General Memoranda, page 27. It is discussed below, paras. 55 and 56.

The resolution, though widely supported, was opposed by representatives from Burma and Assam, on the ground that the University of Calcutta exercises jurisdiction over the colleges in these provinces, and therefore should not be placed under the exclusive control of the Bengal Government. To this it was answered that the Central Provinces in like manner fall under the jurisdiction of the University of Allahabad, which is controlled by the Government of the United Provinces; and it was also pointed out that while Burma and Assam possess only two colleges apiece, there are no less than 41 colleges in Bengal for which the Government of Bengal is directly or indirectly responsible. Sir Sankaran Nair, speaking on behalf of Government, accepted the resolution, thus suggesting the ultimate approval by the Imperial Government of the change, as eventually desirable; but added that it should be delayed until the proposed Universities of Patna and of Rangoon should be established.

17. Many of our correspondents have also discussed this question. A number of them favour the change. Those who oppose it do so on the grounds that the relation with the Government of India gives prestige to the University, and affords it a chance of getting a larger share of the Imperial funds available for university purposes than it might otherwise secure. But these correspondents scarcely appreciate the difficulties of the existing arrangement; which will become clearer when we have analysed, in further detail, the organisation and functions of the Education Departments of the two Governments.

III.—The educational organisation of the Government of India.

18. Until 1902 there was no special organisation in the Government of India for dealing with education, which was held to be mainly the function of the provincial departments of public instruction set up in 1855. Such general supervision as was attempted—it amounted to very little—fell within the sphere of the Home Department, where it was carried on by officers who had no direct contact with educational work. In 1902, as a result of an educational conference held at Simla in the previous year, Lord Curzon instituted a new office, the holder of which was known as the Director-General of Education. This change was at first regarded,

as Lord Curzon himself recognised,[1] with a good deal of trepidation, as indicating a desire on the part of Government to centralise education. The alarm was misplaced. The name of the Director-General was a misleading one, since the new officer had no executive powers, but was only an adviser to Government, a sort of intelligence officer. Educational matters were still dealt with by the Home Department, and it was the Home Department, in conjunction with the Legislative Department, which was responsible for the Universities Act of 1904. Nevertheless Mr. (now Sir) H. W. Orange, the first (and only) Director-General of Education, though hampered by the denial of all effective power, was able to do useful work, which showed that the Government of India might render services of the highest value by keeping the educational work of the various provinces in touch with one another, and providing expert guidance.

19. After the Act of 1904 the Government of India began to play a much more important part than it had hitherto done in educational affairs, and to make substantial grants of money both directly to the universities and also to the provincial Governments for new educational developments. The consequence was that a more distinct organisation of educational work became necessary, and in 1910 a special Department of Education was established, with an office of its own and a Member to represent it in the Executive Council of the Government. The sphere of the new department included, and still includes, a good deal more than education. It deals also with medical research funds, with patronage of books, with books and publications, with copyright, with the Imperial Library, with museums, with zoological gardens, with record offices, with archæology and ethnography, with the zoological and linguistic surveys; and it controls the Board of Examiners.[2] These are all subjects akin to education. But besides these, ecclesiastical affairs, sanitation, municipalities and local boards all fall within the purview of this miscellaneous department.

20. At first the new department was divided (under the Education Member, Sir Harcourt Butler) into two main sections with

[1] *Lord Curzon in India, 1898-1905*, (Macmillan and Co., Ltd., London, 1906), Volume II, page 55.

[2] This Board, founded in 1806, conducts language examinations for civil and military officers of Government.

two secretaries, a member of the Indian Educational Service (Mr. H. Sharp) being in charge of education, while the other branches were placed under a member of the Indian Civil Service. But in 1915 the Department was reorganised. Its whole business was put under the control of a single secretary, who must be a member of the Indian Civil Service, so that the office chief of the Education Department must practically always be a man who has had no direct educational experience. Under the secretary are two assistant secretaries, one of whom deals with educational affairs, the other with the remaining functions of the Department.

21. At the same time a Bureau of Education was established, and placed under the charge of an officer styled the Educational Commissioner (Mr. Sharp). The Educational Commissioner is not an executive officer of the Department. But he is kept in touch with all its proceedings; he gives advice; and he collects and correlates information in regard to the progress of education both in India and elsewhere. We desire to express our gratitude for the assistance which has been in many ways afforded to us by the Educational Commissioner and the Bureau of Education, and our high sense of the importance and value of the services which they already render to Indian education, and can render yet more fully in the future.

22. The educational functions of the Government of India, acting through the Department of Education, are of two kinds. In the first place, it exercises certain functions of general supervision and control over the educational work of the provincial Governments. In the second place, it has certain limited functions of a directly executive character, of which the most important is the control of the University of Calcutta.

23. Among its more general functions perhaps the most important is that it advises the Secretary of State, and forms the channel of communication between him and the provincial Governments. It has to see to the enforcement of the rather complicated regulations by which the Educational Services are controlled; of these we shall have something to say later. It advises Government in regard to the distribution of Imperial subsidies for education. These have been, in recent years, on a much more generous scale than ever before; and the mere fact that it now supplies so large a proportion of the available funds, gives to the

Government of India and its Department of Education a great influence in shaping the general educational policy of the Indian Empire. This function of moulding the general educational policy of India, in conjunction with its necessary complement, the collection and arrangement of organised information, which is the work of the Bureau of Education, is the most valuable part of the Department's activities.

24. The importance of the exercise of a co-ordinating influence over the general educational policy of India was emphasised by Lord Curzon as long ago as 1901, when, addressing the Educational Conference at Simla (which was the beginning of many new departures), he spoke as follows[1] :—

"Is there an educational policy of the Government of India at all? If so, is it observed, and what is the machinery by which it is carried out? Is there any due supervision of this vast and potent engine of creative energy, or, after its furnace has been fed, are the wheels left to go round, and the piston rod to beat, without control? I cannot answer these questions as I should wish. There seems to me to be a misdirection, and, in some cases, a waste of force, for which I cannot hold the Government free from blame. I observe a conflict of systems which finds no justification in the administrative severance, or in the local conditions, of separate provinces and areas. In the praiseworthy desire to escape centralisation at headquarters, we appear to have set up a number of petty kingdoms, a sort of Heptarchy, in the land, whose administration, in its freedom and lack of uniformity, reminds me of the days of the Hebrew judges, when there was no king in Israel, but every man did that which was right in his own eyes. Elasticity, flexibility, variety, our system must have. But it will lose half its force if they are not inspired by a common principle and directed to a common aim. ... I hold the education of the Indian people to be as much a duty of the Central Government as the police of our cities, or the taxation of our citizens. Indeed more so, for whereas these duties can be safely delegated to subordinate hands, the Government can never abrogate its personal responsibility for the living welfare of the multitudes that have been committed to its care."

25. The policy indicated by Lord Curzon, at a moment when education in India was receiving from him a new impulse, was that while the actual conduct of educational affairs ought to be in the hands of the provincial Governments, and while there ought to be the utmost freedom and variety in the adaptation of educational policy to the varying needs of different parts of the country, the Government of India, without interfering in details, should exercise a general co-ordinating influence. It has endea-

[1] *Lord Curzon in India, 1898-1905*, (Macmillan and Co., Ltd., London, 1906), Volume II, pages 33-34.

voured to do so, partly by collecting and disseminating information, and by giving advice and financial assistance to local Governments and universities, partly by holding a series of conferences of representatives of all the provinces on various matters of special interest, and partly by issuing from time to time full and carefully considered resolutions on educational policy, in which general principles have been laid down for the guidance of the local Governments.

26. The governing ideas of this policy are illustrated in one of the most important of these resolutions, that of 1913. Thus, in the second paragraph of the resolution we read :—

"The Government of India have decided, with the approval of the Secretary of State, to assist local Governments by means of large grants from Imperial revenues, as funds become available, to extend comprehensive systems of education in the several provinces. Each province has its own educational system, which has grown up under local conditions, and become familiar to the people as a part of their general well-being. In view of the diverse social conditions in India there cannot in practice be one set of regulations and one rate of progress for the whole of India. Even within the provinces, there is scope for greater variety in type of institutions than exists to-day. The Government of India have no desire to centralise provincial systems, or to attempt to introduce a superficial uniformity; still less do they desire to deprive local Governments of interest and initiative in education. But it is important at intervals to review educational policy in India as a whole. Principles bearing on education in its wider aspects and under modern conditions and conceptions, on *orientalia*, and on the special needs of the domiciled community, were discussed at three important conferences of experts and representative non-officials, held within the last two years. These principles are the basis of accepted policy. How far they can at any time find local application must be determined with reference to local conditions."

In a later paragraph of the resolution (61), the need of co-ordination is thus emphasised :—

"While each province has its own system, it has much to learn from other provinces, and when they meet, Directors get into touch with new ideas, and gain the benefit of experience obtained in other provinces. The Government of India are impressed by the necessity not only of exchange of views among experts, but also by the advantages of studying experiments all over India on the spot, and in a letter dated 7th July 1911, they invited local Governments to arrange that professors ... and inspectors of schools should visit institutions outside the province where they are posted, with a view to enlarging their experience."

27. It must be obvious that the Government of India can perform an invaluable function by thus defining the general aims of educational policy, by giving advice and assistance to local Governments and to universities, by acting as an impartial arbiter in cases

of dispute, by protecting disregarded interests, by supplying organised information as to the development of educational ideas in the various provinces, and also elsewhere than in India, by helping to obtain the service of scholars from other countries, by co-ordinating the work of various universities, and by guarding against needless duplication and overlapping in the provision of the more costly forms of education.

28. Our correspondents[1] adduce many different arguments in favour of the view that while the direct intervention of the Imperial Government should be reduced to a minimum, these functions of general supervision and guidance are of great value and should still be retained. Thus Dr. Wali Mohammad[2] observes that "No one, except in the Education Bureau of the Government of India, ...is engaged in inquiring into the objects of education and determining the means of obtaining them." Mr. W. C. Wordsworth[3] urges that while the provincial Government should exercise immediate control, "the Government of India should remain in the background with a reserved power of intervention if university policy followed a direction not in accord with the interests of India as a whole"; and he suggests that the head of the Education Department should have an *ex-officio* position in every university, in order that he might be kept in touch with their work. Mr. Gauranganath Banerjee,[3] again, while protesting against undue Government intervention in university affairs, points out that the Government—

"alone possesses the power and disinterestedness to bring co-ordination and unity between independent and sometimes antagonistic interests, to see that...the general interests of...the entire nation are adequately secured. Nor is it a sufficient reply to urge that the universities...should be left to work out their own salvation. Even if there were no obvious anomalies, or challengeable methods, or unwise isolation, or wasteful overlapping, the Government of India should have a supervising and controlling power over the actions of the universities. No institution, however glorious, should remain without the stimulus from time to time arising from impartial enquiry, criticism and suggestion by the supervising body. These latter are especially urgent now, when we are seeking after a scientifically related system of national education."

Mr. F. W. Südmersen[2] raises other important points:—

"It is essential," he says, "that the way be not barred to an easy passage from one university to another, and the whole of India should be similarly

[1] Question 14 *passim*.

[2] General Memoranda, page 407.

[3] Question 14.

open to migration. It will be difficult to secure this unless there be a central controlling body...Without this central controlling authority time and money will also be expended in reproducing experiments which have proved failures elsewhere...Whilst, therefore, a wide degree of freedom may be left to universities...considerable powers should be reserved to the Government of India."

Again, Mr. Baroda Prosaud Dey[1] urges that, while the powers of the Government of India should be of a general supervisory character, it might play a useful part by acting as arbitrator in case of differences between a university and the provincial Government.

29. The main reason, however, for urging that, whatever changes may be made, the Government of India should retain some powers of general guidance and supervision, is the need, of which Mr. Gauranganath Banerjee speaks, for "a scientifically related system of national education."[1] This point of view, in one aspect, and as it affects university work, is well expressed by the staff of the Serampore College:[1]—

"We are doubtful of the wisdom of leaving all the university problems of the Province to be settled by the Provincial Government. We are likely to witness in due course considerable advance in the direction of granting a large measure of autonomy to the Indian provinces, something on the lines, perhaps, of what already exists in the United States of America. We are of opinion, however, that the cause of university education in America has suffered through the individual States exercising supreme power in the matter of university charters. Thus, some of the American States have granted university powers to institutions which are little better than secondary schools, while other States rigidly maintain the best university traditions. We have no special schemes to put forward as to the relation that should exist between the Government of India and the Provincial Government in these matters, but we are strongly of the view that the Government of India should not be a negligible factor."

30. In the very full and careful 'Educational Report' submitted by the Rev. Garfield Williams[2] (which was, we understand, the work of a group of reformers) there is a suggestion for the organisation of a special department for the supervision of university work which deserves attention. Mr. Garfield Williams and his colleagues suggest the creation of a Bureau of University Education, to be headed by—

"an officer of high educational qualifications and wide experience, called the Universities Commissioner with the Government of India.' The func-

[1] Question 14.

[2] General Memoranda, pages 453-477. The passage referred to will be found on page 474.

tions of the Bureau will be: (*i*) to advise the Government of India on the establishment of new universities...(*ii*) to receive and record the annual reports and other statements from the universities ...(*iii*) to collect and disseminate all information about universities and higher education generally in India and other countries, and to communicate with other similar Bureaus throughout the world."

It is suggested that, among his other duties, the Universities Commissioner should arrange for a periodical inspection of the universities, on the plan adopted by the British Treasury for the inspection of universities and colleges to which it makes grants. On this inspection Mr. Garfield Williams and his colleagues would rely for the maintenance of the standard of university education throughout the country.

"A special committee will be appointed to inspect each university. Normally these inspections will take place every five years...The Inspecting Committee...will consist ordinarily of one distinguished educationist from overseas, nominated by the India Office, and not more than four other members nominated by the Commissioner from among eminent educationists in India ...The continuance of the Government of India grant will depend, in fact, upon the favourable report of the Inspection Committee."

31. The establishment of such an organisation as Mr. Garfield Williams and his colleagues recommend would present many advantages; in particular, it would make the visitatorial functions of the Government of India much more real than they now are. But even without such a special organisation, the functions of general supervision and guidance now undertaken by the Government of India are manifestly of the greatest value and importance, and might be made yet more valuable: what is more, if the Government of India did not undertake them, they would assuredly be left unperformed.

32. In this sphere no intelligent student of Indian education would say that centralisation has gone too far; the relevant criticism would rather be that it has not gone far enough. Thus there are a number of highly important branches of educational work with which the Education Department is not directly concerned, because it is not so organised as to be able to deal with them. Medical education is the concern of the medical service, though it is impossible to sever training for the medical profession from the preliminary training which leads up to it, or from the scientific studies on which it rests. Engineering education is to some extent under the influence of the Public Works Department.

Commercial and industrial training tend to be taken under the control of the Department of Commerce and Industry. Agricultural education, which is of such vital importance in India, is in the hands of the Agricultural Department.

33. It is thus difficult for the educational policy of the country to be viewed as a whole, in the light of its economic and other needs. The Education Department is apt to be regarded as being concerned solely with bookish and literary training; a view that is apt to have the most unhappy effects. The ideal of "a scientifically related system of national education" is apt to be lost sight of. This defect is even more apparent in the sphere of the provincial Governments than in that of the Imperial Government, since it is, in the main, the provincial Governments which are responsible for the actual conduct of educational work; and we shall have to return to the subject in that connexion. But the Government of India might do much to correct this tendency if its Education Department were so organised as to be able to take into review and to correlate every aspect of educational work.

34. Besides the functions of guidance and supervision appropriate to the central administration, the Government of India also perform certain limited functions of direct educational management. They manage the Harcourt Butler School at Simla, and some of the Lawrence army schools, and they are the ultimate legislative and controlling authority for the Tata Research Institute at Bangalore, and for the Calcutta University.

35. We have already described in outline the control exercised by the Government of India over the University of Calcutta. The Governor-General, as Chancellor, may appoint as many as 80 of the members of the Senate, and his approval is required for the 20 elected members. The original regulations of the University were made by Government, and every change in them has to be approved by it; so that Government is ultimately responsible for every detail in the curriculum, and for the formal regulations governing the examination system. All proposals for the affiliation of colleges in any subject at any grade are ultimately determined by the Government of India; though it exercises no control over the management of the colleges. The Vice-Chancellor is appointed, and every university professor or lecturer must be approved, by Government.

36. Thus the University is in the fullest sense, on paper, though not in fact, a Government university, and there is nothing which happens in the University for which Government is not ultimately responsible. We have already shown how inconvenient is the exercise of a control so detailed by an authority 1,000 miles away, and how it lends itself to delay and friction; we have also noted the anomaly of the exercise of control over the University by one Government, while the responsibility for teaching institutions of university rank (other than the University itself) falls upon another Government. We shall later have something to say on the question whether any Government department is likely to be able to wield with efficiency, and with the freedom of action which is desirable, powers of control so minute and so far-reaching; whether the responsibility which this system thrusts upon Government is one which can be adequately met; whether, in short, the system of complete Government control of university education, familiar in India, is conducive to the best results.

IV.—The educational organisation of the Government of Bengal.

37. We next turn to the part played by the Government of Bengal in the control of university and secondary education. With the University itself, as we have already seen, the Government of Bengal has no formal relations, except that the Governor is Rector of the University, an honorific office with no defined functions, and that the Director of Public Instruction is *ex-officio* a member of the Syndicate. But the Government of Bengal is responsible for the maintenance of seven of the principal 'arts colleges,' and for the distribution of the grants-in-aid without which most of the remaining colleges could scarcely carry on their work; it also maintains the principal medical college, the only training colleges for teachers, and the only engineering college, which provide training for degrees in these subjects; as well as certain institutions which provide instruction not recognised by the University, in medicine, in teaching, in oriental studies, and in technology, engineering and agriculture. Although, therefore, it has no formal relations with the University, it does more for the provision of higher teaching in the province than any other authority. Besides all this, it is brought into very close, and in some ways very unsatisfactory, relations with the University by the fact that while it is directly responsible for the maintenance, in whole or in part, of a

large number of the secondary schools, the University, through its examinations and its power of recognition, exercises a dominating influence over these schools.

38. The direction of educational affairs in the province lies, first, with one of the Members of the Governor's Executive Council; and under him with the General Department of the Secretariat, controlled by a secretary and an under-secretary, both of whom must by statute be members of the Indian Civil Service, and therefore can, as a rule, have no direct educational experience. The General Department of the Secretariat deals with many other matters besides education; and it does not deal with the whole of education, since medical, commercial, agricultural and (to some extent) engineering training fall under other departments, while the whole of the erection, upkeep and repair of educational buildings is a function of the Public Works Department. But all important business relating to general educational work must pass through the Secretariat, which issues orders on all but very minor matters.

39. Alongside of, but subordinate to, the Secretariat is the Department of Public Instruction, to which falls the duty of advising Government through the Secretariat on educational matters, and, in practice, the actual administrative conduct of almost all educational business. The head of the Department is normally, though not necessarily, a member of the Indian Educational Service. While Government may, and sometimes does, make an appointment to this post outside the ranks of the educational staff of the province, this is regarded as an exceptional procedure; and it is a tradition that the position should be given to the senior member of the Indian Educational Service in the province, irrespective of the range and character of his educational experience. The Director is, in fact, the official head of the Educational Services in the province. But he is also an officer burdened with immense and multifarious administrative responsibilities. He advises Government in regard to all educational appointments under Government, whether on the administrative or the teaching side; many of the lesser appointments (under Rs. 45 *per mensem*) he makes on his own authority. All members of the services, therefore, look to him for promotions or for transfers.

40. Under the Director, for administrative work, there are two assistant directors, one dealing with general work, the other

specially with the education of Musalmans. There is also a numerous inspectorial staff, though it is quite insufficient for the adequate inspection of an immense province, in which travelling is toilsome and slow. It includes chief inspectors (one for each division), second inspectors, assistant inspectors (including some specially for Muslim education), deputy and additional deputy inspectors, sub-inspectors, assistant sub-inspectors, inspecting maulvis, chief inspectresses, and assistant inspectresses. It would be tedious, and, indeed, beyond our province, to attempt to explain the various functions of all these officers. We name them here because it is one of the most frequent assertions of our correspondents, and of the witnesses whom we have interviewed, that the inspectorial staff is too large or even (as some say) unnecessary, and that one of the most needed reforms is its reduction or even its abolition. Having in the course of our investigation been compelled to realise the very great need of the schools of Bengal for more effective inspection and guidance, we cannot accept this view. On the contrary, we are convinced that there is need for a strong staff of visiting examiners and inspectors of real educational knowledge and experience. Such men can only be got by the payment of good salaries.

41. In the performance of its vitally important duty of guiding, and to some extent organising, the educational progress of Bengal, the Department of Public Instruction is, in our judgment, gravely hampered, first by the fact that certain highly important educational functions are excluded from its purview, so that it cannot take into review the educational needs of the province as a whole in relation to its economic and social requirements; secondly by the nature of the relationship between the Department and the Secretariat; and thirdly by the unsatisfactory nature of its relationship with the University. It will be convenient to consider these three points in turn.

42. On the first point it may be worth while to quote some striking observations which were made by Sir Claude Hill, as Chairman of the Conference on Agricultural Education held at Simla in June 1917.[1] It is obvious that in a province where three-fourths of the population spend their lives in agricultural work, the need for agricultural training must be one which ought to affect deeply every grade of education, primary, secondary and university. The

[1] See the published report of the Conference.

Simla Conference was engaged largely in discussing the need for introducing an element of agricultural training in the primary and secondary grades as well as in the university grade, and also the need for producing a very large number of qualified teachers. The proposal most favoured was that this work should be undertaken by the Agricultural Department. One of the members of the Conference, Mr. S. Higginbottom,[1] had urged that the work ought to be placed in the charge of the Departments of Public Instruction, so that it might be adapted to the rest of the educational system, as in other countries. To this suggestion Sir Claude Hill, while agreeing in principle, found it necessary to give a somewhat discouraging reply :—

"I do not think that any one will question seriously the soundness of the general principle . . . . but we have always to qualify general views and principles of this kind by reference to the conditions obtaining in the country with which we are dealing. . . . . Here the Education Department in each province is organised under one Director of Public Instruction, who is an academic person assisted only by other academic persons. He cannot himself undertake *outside work*[2] efficiently. In other countries, especially in America, Canada and so forth, there is a large head-quarters staff, with an organiser at the head, assisted by a large number of experts . . . . We may agree to hope that a time is coming when a large educational organisation will be required in India. But we . . . . are hardly in a position to urge the bringing about of such a change at the present time. It may be wise hereafter, when for instance the Agricultural and Commercial Departments have developed, to put their educational efforts under the Education Department, as is done in Canada and elsewhere, but that will only be possible, I think, when the Educational Department is remodelled, with, for instance, a secretary to Government, and under him a director of training, a director of agricultural education, a director of commercial education, a director of primary and secondary education, and so forth."

43. In this passage Sir Claude Hill has drawn attention to a grave need of the Indian educational system, the need of co-ordination, and has shown that, in order to meet it, a reorganisation of the Department of Public Instruction, or, at any rate, a more effective co-operation among the various departments concerned in educational work, is needed. It is indeed an unhappy state of things that the training of boys for the occupation which engages

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[1] His very full memorandum on agricultural education will be found in General Memoranda, page 4.

[2] The italics are ours.

three-quarters of the population should have to be regarded as 'outside work' for an officer bearing such a title as Director of Public Instruction. And it must be recognised that the Department of Public Instruction is not so organised as to be capable of dealing with the problem of agricultural education. But one is inclined to ask whether the suggestion that, in the war against ignorance, the advance of the agriculturists and the commercialists should take place independently of the rest, and that there should be no head-quarters organisation until they have attained success, is not a little like a suggestion, in the military sphere, that the artillery and the cavalry should each fight independently of the infantry, and that no general staff should be appointed until they were victorious. They never would be victorious; because a general staff and a plan of campaign are the first indispensable requisites for success, in the war against ignorance as in other forms of warfare. The organisation of a general staff implies unification of direction. But it need not imply anything so costly, and so productive of friction, as the establishment of a whole series of directors of watertight compartments. All that is necessary is that the best advice should be available, and should be used.

44. The development of a reasonably wide and varied system of secondary training and, not less certainly, the re-organisation of university education so that it may meet all the varied needs of the province, are alike dependent upon a proper co-ordination of the whole system. If this is so—and it would appear to be undeniable—then, plainly, some mode of educational organisation is necessary, in which the influence of the agricultural, industrial and commercial interests, and of other interests also, can make itself felt in the general planning and direction of the whole system, as well as in the organisation of such special technical institutions as may be necessary.

45. The second difficulty which hampers the work of the Department of Public Instruction arises from the nature of its relations with the Secretariat, whose consent is necessary for all important steps, though its officers have no direct contact with, or, unless exceptionally, experience of, educational work. Much must depend upon the personal relations of the Director and the Secretary; and we wish here to say, after a pretty close experience, that these relations could not be more admirable than they now are in Bengal.

But secretaries often change with great rapidity,[1] and a new secretary must take time to learn the ropes. However easy the relations may be, time is lost, because so much work has to be done twice. Sir H. W. Orange, formerly Director General of Education with the Government of India, who was himself greatly hampered by the system, once described it as a 'bi-cameral' system.

46. To reduce this difficulty, it has been often suggested that the Director should himself become a secretary to Government. In the Punjab the Director has been, for forty-five years, an under secretary to Government, and according to Mr. J.C. Godley (himself Director) "there has been no trouble of any kind," and the working of the system is "absolutely satisfactory."[2] But the objection raised to this proposal is that the Director ought to be a touring officer, free at all times to pay personal visits to colleges and schools about which any difficulty may arise; and on the assumption that the inspectorial staff is inadequate, either in numbers or in qualifications, to be trusted with this work, no doubt there is force in this objection.

47. Nevertheless this change was strongly recommended by experienced educational administrators who appeared before the Public Services Commission. Thus Mr. G. E. Fawcus,[3] (now Officiating Director of Public Instruction in Bihar and Orissa), said that—

"at the present moment things were being done twice over. After being carefully considered by the inspectors or professors, a case would be discussed at great length by the clerks in the Director's office; it was then sent to the Secretariat by the Director, and the work of noting would be done all over again. The work would be halved if the Director became Secretary; there would be one office instead of two, the Director would have a better class of clerks at his disposal, and he would have all the printed records before him for reference."

48. Mr. C. F. de la Fosse,[4] Director of Public Instruction in the United Provinces, spoke still more strongly. Among the defects

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[1] Mr. C. F. de la Fosse told the Public Services Commission that during his seven years' service as Director in the United Provinces there had been six secretaries in the department in charge of education, and four or five financial secretaries (who deal with local and municipal education). Report, Volume XX, page 42.

[2] Appendices to Public Services Commission Report, Vol. XX. Evidence relating to Education Department, page 63, para. 83,077.

[3] *Ibid.*, page 63, para. 83,077, page 73, para. 83,154.

[4] *Ibid.*, page 39, para. 82,839.

of the existing system which he emphasised were that it tended to excessive labour and waste, because Secretaries to Government had not the requisite experience and were constantly changed; and that the system of dual educational secretaries rendered devolution of administration impracticable. "The severest critic of the system", Mr. de la Fosse added, "has been a member of the Indian Civil Service appointed to act as Director. Sir Archdale Earle[1] considered it to be utterly dispiriting, because a deadlock may ensue between the Director and the Secretary, time is wasted in irrelevant criticism, and avoidable trouble has to be taken in drafting formal correspondence between the Director and Government." Mr. de la Fosse added in evidence[2] that in his opinion the Director if made Secretary to Government—

"would not have less time than he had at present for his particular work, but more. At present a very great deal of the witness's time was taken up in noting for the Secretariat on questions which had been sent up to it, and on which the Secretaries required more information, or which they did not quite clearly understand. The number of demi-official letters he had to write in the course of a year ran to many hundreds. Of that work, he would, under his scheme, be freed at once and he would probably have more time than he had at present for touring about."

49. We feel it incumbent upon us to say that the inconveniences and delays incident to the present system have been very clearly brought home to us; that it seems to us to cause needless irritation, and to diminish the efficiency and authority of the Department of Public Instruction; and that as a means to ensuring a more effective working both of the secondary system and of the colleges (so far as these are under Government control) it is important that there should be some change of system. If any large scheme of reform in secondary and intermediate education, such as we shall propose, is to be carried into effect, it seems to be essential for the sake of rapid action that there should be a large amount of devolution, either to the Department or to some new authority such as we shall venture to recommend. Again, as things are, every proposal affecting the staff, buildings, equipment or hostels of a Government college must be dealt with by the authorities we have described, which are, in fact, the

[1] D. P. I. in Bengal, 1906-08.

[2] Appendices to Public Services Commission Report, Volume XX. Evidence relating to Education Department, page 41, para. 82,857.

controlling authorities or ultimate ruling bodies of all these colleges; and in order that institutions for university training may enjoy that increased degree of elasticity and adaptability which will be necessary under the proposals we shall put forward, it appears to be essential that in this respect also there should be an increased amount of devolution and of freedom of action.

50. The third difficulty which hampers the work of the Department of Public Instruction is the unsatisfactory relation which exists between it and the University. The Department is responsible for the maintenance of certain of the colleges as efficient teaching institutions; but the University (and behind it the Government of India) define wherein efficiency consists. The Department is responsible for the maintenance of an efficient system of secondary instruction. But, while it enjoys a certain amount of freedom in the definition of the equipment that ought to be provided, and of the appropriate curricula for the lower classes, in those schools which it provides or aids, the curriculum of the higher classes even in these schools is in fact determined entirely by the demands of the university matriculation examination, while the University alone has anything to say regarding the equipment of recognised but unaided schools. When the Department endeavoured to organise more practical schemes of education[1] at this stage, these schemes were almost a total failure, because the University (being concerned only with qualifications for admission to its own classes) could give them no recognition.

51. No modern Government can evade the responsibility for ensuring that, either through its own schools or otherwise, a sound system of school training is provided for boys and girls. This responsibility rests primarily upon the Department; but it has no power to fulfil it, partly owing to the insufficiency of funds, partly owing to the division of responsibility with the University. It is one of the primary duties of a Government, while encouraging private effort and variety of type in education, to warn the people, and, so far as possible, to protect them against deleterious education, as against adulterated food. The Department cannot fulfil this function, because, as things are, bad schools can meet the requirements of, or at least cannot in practice be denied recognition by,

[1] See Chapter III, paras. 51 and 52 and Chapter VIII, para. 48.

the University. The University cannot help the bad schools to become better, because it has no funds. The Department cannot help them, because, as things are, it also has insufficient funds; and, moreover, some of the schools find it more profitable to go on in their present condition rather than accept Government aid, with the conditions that accompany it. Thus the Department finds itself in the exasperating and disheartening position of being held responsible for a system which it can do little or nothing to amend.

52. Public opinion in Bengal is accustomed to the recognition of high schools by the University and values it highly. Yet the governing bodies of the University are not so constituted as to be able to consider school problems with effect, and they have no inspectorial staff of their own. All that the Department can do is to lend to the University, in accordance with prescribed procedure, and without charge, the services of its inspectors, thus loading their already overburdened shoulders with a great volume of additional work; and in the end, the recommendations of the inspectors are not always followed, nor is it reasonable to expect that they should be. It is an impossible situation, for which neither side is to blame. But it is disastrous to the development of a sound system of school education in Bengal.

53. Just as it is necessary to find some means of co-ordinating the activities of the Department of Public Instruction with the other departments which now deal with special spheres of education, and some means of diminishing the delays and possible friction which may result from the existing relation of the Department and the Secretariat, so it is even more necessary to find some means of co-ordinating the work of the Department and that of the University. Without this, every attempt at a serious educational reform, such as is urgently and desperately needed in Bengal, must end in failure. These general questions of administrative organisation are an essential part of the problem with which we have to deal. Without some reorganisation of administrative machinery, any effective reconstruction, such as the conditions now existing in Bengal demand, is out of the question.

V.—The complexity of the existing system.

54. University education in Bengal, and secondary education, which is inextricably connected with it, are thus under the

jurisdiction of a number of often conflicting and competing authorities. There is the authority of the Government of India as the co-ordinating power for all-Indian educational policy ; and the authority of the same Government in its special aspect as the ultimate ruling body of Calcutta University. There is the authority of the Government of Bengal as the power which organises colleges and schools and distributes grants. There is the authority of the Secretariat in Bengal alongside that of the Department. There are the conflicting influences of those special Departments, both in Simla and in Calcutta, which deal with particular aspects of educational work. There are the governing bodies of the University, Senate, Syndicate, Faculties and Academic Councils, sometimes delayed by discussions with one another, and often by discussions with the Government of India or the Department in Bengal. There are the governing bodies of the colleges, controlled on the one hand (in some cases) by the Department, and on the other subject to the University ; and among all these there is no efficient co-ordination.

55. The influence of this conflict of jurisdictions upon the working of a college is pointedly illustrated in a memorandum submitted to us by the staff of the Sibpur Engineering College,[1] which describes in detail the process through which a proposal for change may have to go before it can be put into operation. The memorandum is meant especially to illustrate the complexity of the system of university administration ; and if, at some points, it rather exaggerates this complexity, on the other hand it underestimates the elaboration of the stages through which the proposals will have to pass in the Government offices.

56. Suppose that a change in curriculum—say the introduction of a new scheme of study in civil engineering—is desired. The principal of the college must first discuss it with (*i*) his colleagues on the teaching staff, and with (*ii*) the Governing Body of the college, which is appointed by the Government of Bengal. He may further refer it to (*iii*) the Board of Visitors, which consists of persons interested in engineering education ; and he will be wise to obtain the support of (*iv*) the Director of Public Instruction, who is his immediate official superior. The proposal is then sent to (*v*) the Syndicate of the University, which gets a report from (*vi*) the

[1] General Memoranda, page 27.

Faculty of Engineering, and forwards it to (*vii*) the Senate. Supposing the scheme to pass through all these stages without difficulty, it must next go to the Government of India for confirmation because it will involve a change in the regulations of the University. It will be forwarded to the Government of India by (*viii*) the Governor of Bengal as Rector, who may add his comments. At Simla it will be minuted on, and recommendations will be made, by (*ix*) the Department of Education; it may also have to be referred to (*x*) the Department of Public Works and (*xi*) the Department of Commerce and Industry. The final decision will rest with (*xii*) the Governor-General in Council. In case of any difficulty, the Government of India is sure to ask for the opinion of the Government of Bengal, which is immediately responsible for the college; and this will mean that the proposal will be minuted on in the office of (*xiii*) the Director of Public Instruction, from whom it will go to (*xiv*) the Secretariat and (*xv*) the Member of Council in charge of Education, before being discussed by (*xvi*) the Governor of Bengal in Council. It then goes back to (*xvii*) the Government of India, where it may possibly be discussed all over again; and is returned to the Syndicate, and through it to the college, as a definitive change in regulations. The changes made during all these discussions may have altered the whole character of the proposal, but that cannot now be helped. But it is probable that to carry the change into effect involves an expenditure of money. For that reason the principal will again have to go to (*xviii*) the Governing Body of the college to get its approval and its support in approaching the Government of Bengal for the necessary funds. Once more—this time in the form of a request for funds—the matter will have to go before (*xix*) the Director of Public Instruction, (*xx*) the Secretariat, and (*xxi*) the Member in charge of Education; it will almost certainly be referred to (*xxii*) the Public Works Department; and will be finally settled by (*xxiii*) the Governor in Council. This is an extraordinarily elaborate procedure. Of course it is not necessarily followed on all questions, or even on most questions; but it may have to be followed on questions which do not necessarily involve any profound issues of principle, but which might be, and ought to be, rapidly decided. "The obstacles, it will be observed, are great," say the staff of the Engineering College, "and the time lost in obtaining sanction to any change is prodigious, even supposing the file never gets mislaid on the way. The result is that

one does not readily come forward with any proposals for improvement, and that the courses of instruction are apt to get hopelessly behind date."

57. Thanks to the expenditure of an enormous amount of hard and conscientious work in the various departments involved, this system does not lead to the absolute deadlock that might be anticipated; and the theoretical elaboration of the system is in practice often qualified by informal conferences. The complexity is, indeed, very largely due to the extreme conscientiousness and care with which all matters of public concern are dealt with in the public offices: the officials will not trifle with the responsibilities which are imposed upon them, or give their assent to proposals to which their assent is required without examining them thoroughly. But it must be obvious that if the process of reform in education is to be carried out effectively, there must be a great simplification of these processes, a devolution of responsibility, a clearer definition of functions, a demarcation of the spheres of Government and the University, and an organised system of co-operation where these spheres overlap.

VI.—What ought to be the relations between Government and the Universities?

58. Having surveyed the working of the existing system of Government control, as it is exercised both by the Government of India and by the Government of Bengal, we are now in a position to discuss the fundamental problem raised by Question 14 in our questionnaire: what should be the relations of Government to a university under such conditions as exist in Bengal? The great majority of our correspondents, Englishmen and Indians alike, hold the view that the functions now exercised by Government ought to be modified so as to allow to the universities a greater degree of freedom. But they are, for the most part, rather vague as to the precise meaning and limits of this freedom; there are very few who are able or willing to define, in any but the most general terms, the relations which ought to be established.

59. The clearest and fullest exposition of the present system, and of the reasons for its maintenance, is given by Mr. H.

Sharp,[1] Educational Commissioner with the Government of India.

"As to the nature of the relations which should exist between the University and Government .... one is faced with a great variety of different models, from the purely State university, such as is found on the continent of Europe and in some of the United States of America, to those over which the control is very slight, as in the United Kingdom. The nature of the control should be fixed with regard to the local conditions. The conditions in Bengal which affect the issue are :—

(*a*) The widespread desire for a university education resulting from the lack of variety in employment.
(*b*) The weakness of public opinion in regard to discipline and standards.
(*c*) The insistence urged by a certain class upon popular control in university matters.
(*d*) The introduction of non-educational motives into educational questions.
(*e*) The existence in the country of local variations and conflicting interests.

These conditions are inimical to university development on proper lines, and point to the desirability of establishing State universities .... On the other hand, there are certain considerations which bear in the opposite direction. These are (*a*) the traditional British policy regarding universities; (*b*) the desirability of affording to India every opportunity of training in self-governing institutions; (*c*) the existence in the country of an external power, necessitating, within all reasonable limits, discussion and advice in matters which affect the public at large. Hence, it appears advisable to steer a middle course."

60. Mr. Sharp then proceeds to classify and discuss the various aspects of university work in regard to which the influence of Government is, or in his judgment ought to be, felt. In regard to the recognition and examination of schools he maintains that a university cannot control schools,[2] and that the present unsatisfactory condition of the schools in Bengal is, at least in part, due to the way in which the powers of the University are exercised by the Syndicate, whose members "can hardly be expected to have any first-hand knowledge of the schools." In this respect, therefore, he urges that the control of Government should not be diminished, but should be made more effective. "But the work should mainly be performed by a Board, under the chairmanship of the Director of Public Instruction, and containing representatives of the universities, of the schools, and of various kinds of employers, and the

[1] Question 14.
[2] See his very full answer to Question 8.

whole of the superior inspecting staff."[1] This very important suggestion will be more fully discussed in a later chapter.

61. In regard to the regular work of the University, above the entrance level, Mr. Sharp makes the important point that different treatment is necessary for local teaching universities on the one hand, and for an affiliating university on the other; but he does not work out this distinction very fully; we shall return to it later. In teaching universities Mr. Sharp advocates[2] "the creation of academic bodies so that interference by Government should be unnecessary in regard to the arrangements of teaching and discipline." It would appear, therefore, that in Mr. Sharp's view (though he does not definitely say so) Government interference in purely academic questions is due to the fact that in universities of the existing type the governing bodies are not sufficiently academic in character to be able to exercise full autonomy in this respect. "The framing of regulations," he adds, "is a power which I should like to see placed entirely in the hands of the universities. But this could not safely be done at present." He does not attempt to draw a distinction between the kind of regulations upon which it is necessary that Government should be consulted, and the kind of regulations upon which such consultation would be unnecessary, or suggest the lines upon which such a distinction might be drawn.

62. In the affiliating type of university, Mr. Sharp holds that "the affiliation and disaffiliation of colleges should, as now, rest with Government, and every resolution on such a case, moved by a member of the administrative or academic bodies, should come to Government for ultimate decision". He does not explain his reasons for this conclusion; but the main reason obviously is a fear lest injustice might be done, or standards be unreasonably lowered. Again, he provides that "appointments to university chairs, etc., which are supported wholly or in part by Government money, should require the previous sanction of Government."[2] Other university appointments he would leave to the University, "subject, of course, to the veto of Government in the case of undesirable persons." He does not explain the reasons for this distinction; nor does he discuss the question whether a mode of

[1] Question 8.
[2] Question 14.

appointment for both types of posts might not be discovered which would be unexceptionable from the point of view both of Government and of the University. If the appointing body is constituted in a satisfactory way, there seems to be little reason why any distinction should be drawn between the posts financed by Government, and those otherwise financed. If the appointing body is not satisfactory, it ought to be amended; and its mistakes are not likely to be rectified by the interventions of a Government office which, in the nature of things, cannot be well organised for this kind of work.

63. In pointed contrast with Mr. Sharp's view is the view expressed by a few of our correspondents, that the University should not only be freed from all Government control, but should, in a manner unknown in any country in the world, take over practically the whole functions of the Departments of Public Instruction, leaving to Government only the humble and not very enticing function of paying the bill. Thus Rai Mahendra Chandra Mitra, Bahadur,[1] lately Chairman of the Hooghly and Chinsura Municipality, claims that—

"the colleges and schools and all teachers and professors should be under the control of the University. The Director of Public Instruction should be subordinate to the University. All educational grants given by Government should be handed over to the University and the members of the Syndicate should have a free hand in framing budgets on all educational matters."

64. Mr. Manmathanath Banerji[1] is even bolder.

"The University should absorb the Education Department.... and have a free hand regarding the educational policy of a province .... The University should have a definite source of allotment (*sic*) from the Government revenue of the province and *should also be empowered to tax the municipal institutions, the Port Commissioners and the railway companies in the province.*"[2]

Perhaps we may attribute the last suggestion to Mr. Banerji's recognition of the fact that, out of the limited funds at its disposal, Government cannot find an indefinite amount for educational purposes; but we are not aware of any other instance in which it has ever been suggested, in any country, that a university should have independent powers of taxation.

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[1] Question 14.

[2] The italics are ours.

65. A similar proposal is made by the Rammohun Library Conference,[1] in even more striking terms:—

"This brings us to the question of a rational scheme of control in matters educational. The entire control of education in every stage—elementary, secondary and higher—and of every description—general, technical and commercial—should be placed under one body .... The inspection of schools and colleges, the formulation of curricula, the enforcement of rules and regulations, and the allocation of funds, should be made by this body. This may be the University itself, reorganised to suit the expanded scope of its duties and responsibilities. This body should be freed from interference by the Government departments, and the entire State expenditure on education should be placed under its control."

66. We recognise in these proposals a sincere desire to see the educational system of the country unified and reorganised: but it would be unfair to take them too literally. There is no greater danger to educational vitality than an extreme degree of centralisation such as our correspondents suggest. What they fail to see is that if the University were developed into a Department of Education, it would cease to be, in any intelligible sense of the term, a university at all. It would become a vast administrative machine, dominated inevitably by officials, who would be none the less officials because they were not paid by Government, and were effectively responsible to nobody. The influence of the teachers, who are the heart of any university, would become negligible, unless they were ready to neglect their main work in order to devote all their time to affairs; and the real work of a university would be lost sight of in the multiplicity of administrative details.

67. The correspondents we have quoted are, in fact, so deeply influenced by the unhappy system which has developed the Indian universities as administrative machines, that they find a difficulty in grasping the ideal of a university as a corporation of learning. They cannot see that the only way in which the University can achieve that freedom which ought to be its heritage is the same way which has been followed by other great universities; that of concentrating their main strength upon teaching and investigation, and disembarrassing themselves as fully as possible of all those administrative responsibilities which are not necessarily connected with their primary duties, and which, if they undertake

[1] General Memoranda, page 440.

them, must inevitably bring them into a relation of dependence upon the main administrative organs of the country. It is partly because the Indian universities are, in the main, administrative bodies, and not corporations of learning, that they do not enjoy a higher degree of freedom than they now possess.

68. The majority of our correspondents, while united in advocating an increased degree of university autonomy, are more modest in their views, and for the most part recognise that the essential sphere of academic autonomy is in the control and conduct of teaching and research. "Government may well claim a right to see that the funds contributed by it are properly applied for the advancement of sound learning," says Sir P. S. Sivaswamy Aiyer.[1] "Generally speaking it may be said that they should interfere as little as possible in the internal administration of the University, but it would be hazardous to lay down any general propositions." "In academic matters Government should have no powers of interference," says Mr. Charu Chandra Biswas. "University education has reached a sufficiently high stage of development to have a large measure of independence," says Dr. C. E. Cullis. "Government should interfere as little as possible with the normal working of an educational body like the University," says Mr. Devaprasad Ghosh. "Government should have general control over the University," says Dr. Hiralal Haldar, "but should not interfere with the details of administration." "The internal management of the affairs of the University, or its educational administration, should be free from all interference by Government, but the provincial Government should have a hand in the financial control of the University," says the Maharajadhiraja Bahadur of Burdwan. "The University should have the fullest academic control over the courses of study and the selection of teachers," says Mr. Satis Chandra Ray. "I consider that a university is by nature an autonomous body," says Mr. F. C. Turner, "and that, though mistakes are made, and will be made, these mistakes are a lesser evil than official control would be."

69. But these are very general statements. They are usually combined with the statement that Government ought to exercise some general supervisory powers; but little is said as to the way in

[1] All the quotations in this and the following paragraphs, except where otherwise stated, are taken from answers to Question 14.

which these needs can be reconciled. Perhaps the clearest statement, in general terms, comes from Dr. Tej Bahadur Sapru:—

"I am strongly of opinion that our universities should not be 'run' as departments of Government, and that they should be self-contained and fully independent. I would give a predominant voice in the affairs of the University to the expert element, but at the same time I would have a sufficiently strong representation of the cultured public outside universities. I see no reason why the highest questions of educational policy should be decided, over the heads of educational experts, in the Secretariats of the Government of India and the provincial Governments. It seems to me that the true progress of education in India is impossible unless it is rescued from politics—official and non-official . . . . . In a country situated as India is, there is little chance of the educational expert having his own way against the dogmatic opinions of those whose word is final in the determination of all questions of policy. I should not, however, be understood to say that I wish to cut off universities altogether from Government. As Government are, and will for a long time to come continue to be, responsible to a very great extent for the finances of our universities, I should like to give them a sufficiently effective voice in their deliberations."

70. This is a very sound and moderate statement of the case. But it depends upon two things; first, the discovery of a means whereby academic matters may be entrusted to bodies which will really consist of 'educational experts' or scholars; and second, the discovery of a means whereby the legitimate influence of Government can be exercised without the inconveniences, delays and irritations which result from the present system.

71. One proposal, put forward by a number of witnesses, is the creation of some sort of standing Board to exercise supervision on behalf of Government. "There ought to be a Board of Education," says Sahebzadah Mahomed Sultan Alum, "consisting of the provincial Governor as Chancellor, the Vice-Chancellor, ... the Director of Public Instruction, a distinguished Muslim member, and a distinguished Hindu member." Mr. A. H. Harley recommends a similarly constituted Board, and adds, "to them should be referred for consideration, before the final sanction of the Rector or Chancellor, (*i*) appointments to the tutorial staff, and (*ii*) matters of policy."

72. Mr. Surendranath Das Gupta advocates a rather different Board, with somewhat different functions:—

"It would be better if the Governor-General delegated most of his powers to a Board consisting of members nominated by the Government of India and the Government of Bengal, and elected by the Bengal Legislative Council and the University. For all ordinary purposes this Board should determine the relation of the Government and the University. It is only when there

is a difference of opinion between this Board and the University that the Government of India should ... finally decide the point in question."

73. Dr. Brajendranath Seal[1] has yet another variant of the same idea. He wants a Provincial Council of University Education, representing the Government, the landholders, the ryots, the commercial classes and the intellectual classes. Only such a body, he urges, "can find the ways and means, moral as much as material, for this remodelling and re-orientation of the fabric of national education, which is a supreme social need of the hour in Bengal." To this body he would entrust the duty of shaping a university policy for the future, of determining where new universities should be established, of developing more practical studies. At the same time—on this he lays great emphasis—he would exclude this predominantly lay body from purely academic affairs: "all educational administration, including the arrangements for courses of study and the conduct of examinations, should be vested in a Senatus Academicus," consisting primarily of teachers. This clear differentiation between the academic and the administrative elements in the government of a university is perhaps Dr. Seal's most valuable contribution to the problem. But he does not indicate what should be the relation between his Provincial Council and Government.

74. These schemes for the creation of councils, interposed between the State and the University, show that our correspondents recognise the difficulty of the problem; but we cannot feel that—in the absence of other and far more sweeping changes—they would do much more than add a fifth wheel to the coach. Our correspondents, indeed, as a whole fail to deal with the question whether the degree and character of State control over universities must not depend largely upon the nature and organisation of the universities themselves.

75. Mr. Sharp,[2] indeed, makes this point; but apart from him the only one of our correspondents to deal with it is Mr. Garfield Williams, who writes:—

"The answer to this question depends on the nature of the universities. If there are to be several of them, and they are to be somewhat of the kind

[1] Question 5.

[2] See para. 59 above.

indicated in the Educational Report sent herewith[1] [that is, localised teaching universities organised on a unitary basis] a relationship such as that indicated in the Report [namely, a very general inspection and supervision by Government][2] is, in my opinion, satisfactory. If they are to continue of the type of the present Calcutta University—mere developments of the University as a glorified examining body—I am strongly of opinion that they should be absolutely controlled by the State. .... But I submit that the *nature* of the university is a prior question, and that no answer can be given until this prior question is answered."

76. The distinction which Mr. Williams here draws is a very sound one. Ever since the first Indian universities were founded, they have been, in fact, departments of State, organised with a view to the performance of certain State functions. One of these is the function of regulating and controlling the work of colleges and schools, many of which are created and maintained, and many more aided, by the State. The State cannot be expected to allow the regulation of these institutions to pass wholly out of its hands; it may delegate this function, as it now does, to universities organised for this purpose, but it retains the ultimate control, because it retains the ultimate responsibility. Indeed it can never abdicate the responsibility for seeing that the school system of the country is working healthily, and so long as it fulfils this responsibility in part through the University, it must retain control over the University. Again, in practice the universities conduct the examinations which form the qualifications for admission to State service; and since the State cannot be indifferent to the qualifications of its servants, it must retain some hold over this function, and some right of intervention in regard to it. In short, so long as the universities continue to be, what they have been since 1857, primarily administrative bodies dealing with functions delegated by the State, they must continue, to a greater or less extent, to be controlled by the State.

77. On the other hand, if they change their character, and become, like the universities of other lands, organised bodies of teachers, investigators and students, which may indeed perform certain functions on behalf of the State, but for which these functions are only incidental to their main work of cultivating

[1] This report is printed in General Memoranda, pages 453-77. The passage on universities will be found on pages 469-75.

[2] See para. 28 above

learning, the situation changes. Towards this conception, new to modern India, the Indian universities have been slowly moving, largely by the encouragement and aid of Government. It is partly because of this development that the demand for greater autonomy has become steadily more insistent. But progress towards autonomy can only healthily take place in proportion as the universities concentrate their main attention upon teaching and investigation, and reduce to subordination the external administrative functions with which they have been loaded; and their system of organisation must be revised so as to correspond with this new conception.

78. Even in the existing type of university it may well be doubted whether a Government control so minute and detailed as that imposed by the present system is likely to produce the best results. It was doubtless necessary at a time when the western methods of university work were entirely unfamiliar, an exotic importation of whose working only those trained in western universities could have any understanding, and which might have gone disastrously astray if not firmly guided from above. Again, when the system had fallen into disorganisation, as it had done at the beginning of the twentieth century, and when new ideals of university work had scarcely begun to exercise their influence in India, it might well appear, as it did to those who were responsible for the Act of 1904, that a tightening of Government control was the only and obvious remedy. But the system, as it now works, has some manifest drawbacks, both from the point of view of the University, and from the point of view of Government.

79. The greatest of these drawbacks is one which is apt to be ruinous to any system of administration, the weakening of responsibility.

(*a*) Responsibility is often weakened in the governing bodies of the University, because its members know that every important decision at which they arrive is liable to be amended or reversed by a superior authority. Under such circumstances the temptation not to take one's responsibilities seriously enough is often great. "The members of the Senate," as Mr. Mohini Mohan Bhattacharjee observes, "feel that their power is illusory and do not take as keen an interest in their work as they ought to do."

(*b*) But responsibility is also weakened in the controlling Government, whose agents must know that they have too little direct contact with the problems on which they have to decide, and that they are themselves out of touch with educational work. Their responsibilities are, in truth, at once too great and too minute to be capable of being adequately met. If a man is made responsible for a multitude of details of which he cannot possibly have a personal mastery, his responsibility becomes unreal, however desperately he may labour to fulfil it. That is what has happened to the Government of India in regard to its control over the University of Calcutta. Since 1904 it has been responsible for every detail. But it has not known, and could not know, every detail; and so, for all its labour and trouble, the result has not been satisfactory.

(*c*) Finally, the responsibility of the provincial Government is weakened. It is responsible, in theory, for the guidance of the whole system of education in the province, apart from the University. But it is quite unable to meet these responsibilities, because they do not correspond with its powers. The powers of the University, which it does not control, and with which it has no system of organised co-operation, conflict with its own at many points.

80. The failure of the existing Indian type of university in many aspects of its work has brought about a demand for a new type of university wherein the teaching function should be predominant. For the suggestion of the new universities of this type Government has in most cases been responsible; and Government has undertaken in each case very heavy financial liabilities. For these reasons the schemes of the new universities, instead of promising a higher degree of autonomy, actually propose in most cases a closer and more direct Government control than has hitherto been exercised in universities of the existing type.

81. It is in the scheme for the Dacca University that the form and working of the proposed new type of State university have been most fully worked out. This scheme will be discussed in detail in another chapter.[1] But in the meantime we think it necessary to say that, in our judgment, detailed Government control, which

[1] Chapter XXXIII.

is unsatisfactory even in universities of the affiliating kind, mainly concerned with administrative work, is likely to be even more unsatisfactory when applied to a real teaching university.

82. In the first place, no Government department, however well organised, is the right body to deal with the details of curricula and the organisation of studies in such a university. For these must depend, in a degree unknown in the affiliating university, upon the special gifts and interests of the university teachers, the needs and capacities of their students, and the kind of equipment which the University possesses. The only body competent to deal with such questions is the body of teachers: if the teachers are not competent to undertake these functions, they are not competent to be university teachers. The essence of a real university is freedom of teaching. But freedom of teaching cannot be profitably used unless the teachers recognise that they are betraying their functions if they deal dogmatically with controverted questions, or extend their academic authority beyond the range of their academic subjects. On the other hand, freedom of teaching requires that the curriculum should not be unduly rigid, and that the regulations whereby the teaching is governed should be as few and simple as the conditions render possible, and should be capable of easy adaptation to the need of teachers and scholars. This is all but impossible under the existing system.

83. Not less in the sphere of finance than in the sphere of teaching detailed control by Government is apt to have unfortunate effects. When it undertakes to defray the whole cost of a university, as was suggested in the Dacca scheme, Government saddles itself with an undefined liability which must tend continually to increase. For under such a system the governing bodies of the University, having no financial responsibility, lack the strongest motive for economy, and especially for that kind of economy which consists in the close supervision and judicious readjustment of estimates. New expansions or developments will be apt to be proposed in a needlessly costly form, since the duty of discovering how they can be most economically effected, and in what order of importance they ought to be undertaken, is not definitely fixed upon one body on the spot. In the administration of the limited funds available for university work in Bengal, or indeed in India, the strictest economy is necessary. This economy is most likely to be attained if the chief administrative body of the University is made responsible

for utilising in the most economical way the resources at its disposal, and is given clearly to understand what are the limits of these resources in each year. This is the system which is likely to produce, in the actual administrative bodies of the University, zeal, thrift and efficiency.

84. We conclude, then, that a system of full Government control of a teaching university, even if the University is wholly financed by Government, has very little to recommend it; and that no university is likely to work well unless the sense of responsibility is brought home in the first place to its teachers, and in the second place to those who are immediately entrusted with its financial administration. But this does not mean that, even in a teaching university (and still more in an affiliating university) there are not highly important functions of supervision and control which can properly be exercised by Government, and in every country are exercised by Government in a greater or less degree. It may be convenient if we attempt here to analyse briefly what are the elements of autonomy which are essential if a teaching university is to perform its functions well; and what are the respects in which, under conditions such as exist in Bengal, Government supervision or control may be desirable or necessary.

85. It is essential to the proper working of a university that the teachers (or rather, the more responsible among them) should have brought home to them very clearly the responsibility, which they cannot evade and which no one can fully share, for the character of the training given to their students, not merely by themselves as individuals, but by the corporate body of which they are members. This responsibility can only be brought home by giving to them a reasonable freedom in the design and conduct of the courses of study and of the examinations of the University. In the exercise of this function it is important that they should be safeguarded, on the one hand, against the temptation to lower the standards of attainment represented by university degrees, and, on the other, against the danger of losing touch, in their work, with the requirements and sentiments of the community which they have to serve. Against the first danger the best safeguard will be the exercise by Government of the rights of general supervision and enquiry or 'visitation' suggested above. Against the second danger the best safeguard will be the existence of a body in the University representative of public opinion, and of the other educational grades.

But neither Government nor this body ought to have the power of interfering in detail, or of holding up or refusing sanction to particular academic proposals, except in very fundamental cases; for this would be to undermine the responsibility of the teachers.

86. Next, it is essential that the appropriate bodies in the University should have brought home to them the responsibility for ensuring that the resources of the University are used in the most efficient and economical way, and should be encouraged to reinforce them by appeals to public liberality. Government may well claim the right to ensure that any funds which it may supply are honestly used for the purposes for which they were intended. But this need not, and ought not to, involve continual intervention in details; because such intervention must tend to undermine the responsibility of the controlling bodies which deal with these matters.

87. These are the essentials of university autonomy; they are essential because without them the sense of responsibility cannot be fully brought home to those who have to conduct the affairs of the University. We may next turn to consider what powers over universities, not inconsistent with these essentials, ought to be retained by Government.

88. In the first place, Government cannot abdicate its responsibility, as trustee for the highest interests of the nation, for ensuring that the highest training grounds of the nation, its universities, are adequately fulfilling their functions. This is the duty of 'visitation,' on which something has already been said. It involves the power to interfere when things go seriously wrong in the affairs of a university, and the power to revise its organisation; but it should not involve detailed intervention from day to day.

89. In the second place, Government is responsible for ensuring that the University is so organised as to be able to fulfil the responsibilities already laid down: that the body of teachers are provided with an organ through which the most responsible among them may be able to exercise the power of regulating the courses of study; that there is an administrative organ which can be trusted to exercise a close scrutiny and control of expenditure, and to guide wisely the general policy of the University; and that there is a popular organ which will be able to give expression to public demands and public sentiments without overriding the judgment of the experts.

This function of Government is in the main performed by the Act of legislation by which the University is constituted. But it may also be necessary—and, indeed, it is in nearly all countries found to be necessary to a greater or less extent—that Government should nominate some of the members, not of the teaching organs, but of the administrative organs, of the University. This becomes not merely desirable but necessary when, as is universally the case in India, the bulk of the cost of working the University (apart from students' fees) is met out of public funds; because Government is responsible for the proper use of these funds. But when it has nominated the best men available, that should be enough—subject, of course, to a proper public audit of the accounts. There is, in India, an additional reason for the use of nomination, to a certain extent, by Government. This is the existence of sharply divided classes and communities, racial and religious, whose interests are nearly affected by the work of the University. It is essential that the principal communities should be represented in the management of university affairs; and nomination may be the best means of ensuring this.

90. Again, in every country, Government reserves the right, directly or indirectly, to regulate the conditions of admission to the medical profession, and to other professions essential for the public welfare, as a means of safeguarding the public against great dangers; and therefore to make certain stipulations regarding professional courses and degrees. And if, and so long as, the awards of the University continue to be the accepted passports to the public service, as they are in India to an extent unknown elsewhere, it is inevitable that Government should be deeply concerned in these awards and in the courses of study on which they are made. This must form, in some degree, a qualification of the academic autonomy of which we have spoken.

91. Finally, it is impossible to separate absolutely the working of the University from the working of the other grades of education through which its students must pass before entering its class-rooms. It may seem, and indeed it is, an essential element in the academic autonomy proper to a university that it should be able to define the qualifications on which it will admit students to its courses; and this implies that the opinion of the academic body of the University as to the kind of training these students ought to

receive should be effectively heard, and should have great weight. At the same time, the schools are not concerned only with the training of future university students; other interests of the country of the highest importance depend upon the quality and training of the recruits whom the schools provide. The University alone, therefore, ought not to determine or control the work of the schools: if it does so, and does so (as must inevitably happen) mainly with a view to its own requirements, all the other interests of the country will be apt to suffer. It is the duty of Government to see that, so far as possible, the youth of the country receive the kind of training needed to prepare them for the general needs of the country. This does not mean that Government ought itself to direct and control the whole of the educational system; but it does mean that it is Government's duty to see that none of the vital interests concerned are unduly neglected. At this point, therefore, Government and the most autonomous of universities must necessarily come into intimate contact. Here some method of co-operation and joint action is necessary, such as Bengal has not yet known.

92. We conceive that it should be perfectly possible to organise a university system which would on the one hand secure to the University those essential powers of autonomy which have been defined above, while at the same time fully securing to Government the power of supervision and control which it is desirable and necessary that Government should exercise. We conceive this to be practicable, however, only on the basis of a very complete reconstruction of the existing system of university administration. Our suggestions on this head will be contained in future chapters. We believe that these suggestions will make the influence and responsibility of Government more real and more effective than it now is, by making it more definite within narrower limits.

VII.—The Educational Services.

93. The whole of the educational work carried on by Government is entrusted to the educational services, in the three grades[1] of which all the administrative and inspecting officers, and all the teachers in Government colleges and schools, from the most responsible to the most junior, are included. The Director of Public

[1] The Indian Educational Service, the Provincial Educational Service and the Subordinate Educational Service.

Instruction himself is, as a rule, also a member of the Indian Educational Service; and though there may be, and have been, departures from this practice, this post is in fact regarded as the highest and best-paid office towards which the ambition of members of the Indian Educational Service may be directed. We have already discussed some of the drawbacks incident to the system of service organisation in the working of Government colleges under present conditions;[1] we shall later have occasion to show that, in various ways, the system now in force must present difficulties to a reform of the methods of university organisation. In the meantime, we propose to analyse in outline the system as it now works, especially as it affects university teaching. It is not necessary to deal with this subject in any detail, because it has recently been the subject of prolonged and careful enquiry by the Public Services Commission; but their treatment of the subject only indirectly referred to the organisation of university work, and that necessarily on the assumption that the existing university system would continue unchanged; and it is therefore scarcely possible to avoid covering part of their ground again, from our special point of view.

94. The members of the Indian Educational Service (which in fact, though not in theory, ranks highest among the three educational services) are appointed by the Secretary of State,[2] assisted by a Committee of Selection. The name of the service—'Indian' as distinguished from 'Provincial'—and the fact that its members are appointed by the Secretary of State would seem to suggest that this service was designed to form a special corps for work in all parts of India. But this suggestion does not correspond with actual practice, the members of the service being allotted not only to particular provinces, but to particular reserved posts in each province. There is a fixed number of defined posts on the cadre of the service in each of the provinces, and this number can only be increased by the approval of the Secretary of State. A consequence of this rule is that if any new proposal, for example for the establishment of a new training college, involves the appointment of a member of this service, the approval of the Secretary of State has to be obtained by the provincial Government through

[1] Chapter XIII, paras. 18-28.

[2] Temporary appointments may be made for six months by the provincial Government or for two years by the Government of India; but if made permanent they have to be confirmed by the Secretary of State.

the Government of India; a process which may lead to long delay, and to a minute discussion of the scheme as a whole. Freedom and rapidity of action on the part of the responsible provincial Government are thus apt to be impaired. Again, since the cadre of this service is strictly divided among the provinces, transfers from one province to another are very difficult to arrange, and occur very infrequently.

95. Members of the Indian Educational Service are paid on a salary scale, rising by regular increments according to seniority. As a general rule seniority governs promotion; and the more suitable man may be excluded from a particular post by the fact that he landed in India a fortnight later than his immediate senior. This system, devised with a view to the appointment of young men who would normally spend the whole of their life in India, has the great drawback that it practically precludes the appointment of men in the middle of their educational career, and of established reputation. Such men are not likely to be willing to begin at the bottom end of the scale; if they are given a higher commencing salary, their appointment may be regarded as a grievance by other members of the service. Special arrangements to secure particular individuals, though not unknown, are consequently rare.

96. Beyond the ordinary service rate of pay, members of the service cannot look forward to promotion or to increased salaries, except by appointment to a Directorship (the only highly paid post in the service) or by being awarded one of the few personal allowances, which are generally given by seniority, and are not attached to any particular post. The principle of seniority is, indeed, so deeply rooted in this service, as in all services, that it is felt by many that all these posts should go by seniority. And, in truth, it must seem hard that a good man who has worked strenuously, and who may be a scholar of distinction, should be denied an increase of salary merely because his strength lies on the side of scholarship rather than of administration. But the alternative must often be the appointment of unsuitable men as Directors or as Principals of colleges.

97. The working of this system is sometimes peculiarly unfortunate in the case of the Directors. Though a Director may be appointed from outside the province, or even from outside the service, the Secretary of State has definitely laid it down that "before appointing a person not belonging to the service, local

Governments should, in the event of their considering it desirable to fill the post otherwise than from the local educational staff, seek the assistance of the Government of India with a view to procuring a suitable selection from the educational department of some other province." The appointment of an outsider of educational and administrative experience, whose previous working life has not been spent under Indian conditions, and who has some practical acquaintance with the working of other systems, would often be desirable; but, though it is not actually precluded, it is made very difficult. And the reason for this is, that it seems unfair to deprive the members of the service of the best paid post at which they can aim.

98. On the other hand, it is obviously unfortunate that men brought out to India primarily to serve as scholars and teachers should have it impressed upon them, by the very organisation of the service of which they are members, that there is no chance for them to make a great career, or to earn a large salary, in scholarship or teaching, and that it is only by devoting themselves to the administrative side of the work that they will be able to earn higher status or pay than is afforded by the ordinary course of service-promotion. The best way of emphasising the fact that the service of scholarship is a career to which a man may rightly devote his life, is to offer to those who pursue it chances, not only of improved salaries, but of distinction and of higher status, as the reward of good work. This is possible in a free university system; it is not possible in a service conducted on such rigid rules as the Indian Educational Service now is.

99. Of the Provincial Educational Service we do not here propose to say much. Its members are appointed by the provincial Government, on the advice of the Education Department; and the cadre of this service in the province can be increased by the provincial Government. There is, in this service, no fixed scale of salary increments.

100. The invidiousness of the distinction now drawn between the Provincial and Indian Services has already been discussed.[1] The Provincial Service was initiated as a result of the Public Services Commission of 1886 for the purpose of facilitating the appointment of a larger number of Indians; and it was intended that

[1] Chapter XIII, paras. 20-21.

the members of the service should rank as equal with the members of the Indian Educational Service. They have never, in fact, done so. The reasons for this are not difficult to understand. In the first place, in India status is to a great extent measured by salary; and the salary scale of the Indian Educational Service is higher than that of the Provincial Educational Service. In the second place, the Indian Educational Service consists of a small number of men, all occupying posts of great importance; the Provincial Educational Service includes a large number of men holding posts of very varying importance, and although it includes some men of first-rate ability, it is obvious that the *average* quality of its members must be inferior to that of the smaller and more highly paid service. Under these circumstances, whatever theory may say, it is impossible that the two services should be regarded as equal. But the theory that they are equal has in some instances prevented the promotion to the Indian Educational Service of some men of first-rate ability in the Provincial Educational Service; with unhappy results.

101. Both services alike suffer from one great defect: their members are liable to be shifted, at the discretion of the executive Government, from one kind of work to another; and though this is done with as much consideration as possible, the desires or interests of the individual cannot always be consulted. Thus a man who is doing good work in Presidency College may suddenly find himself called upon to undertake the work of a principal in a small mufassal college, or to assume administrative functions in the Director's office. The effect of this is to prevent many able men from regarding the work of the University as their main life work.

102. The Public Services Commission[1] enquired into these conditions with great fulness, and made various recommendations designed to remedy the existing evils. They proposed to abandon the distinction between the Indian and the Provincial Services, and to substitute a classification based upon the character of the work to be done. They proposed a new scale of remuneration. They proposed a clear separation between the administrative branch of the service and the collegiate or university branch, the former to include not only inspectors but school masters and officers of training colleges. This is not the place for a discussion of these

[1] Report, Volume I, pages 93-114.

proposals, even in their bearing upon university work: our own suggestions for dealing with a difficult problem will be found in later chapters of this report.

103. But it is noteworthy that the Commission felt much more hesitation when it came to discuss the adaptation of the service system to university work. "In framing proposals for the educational service in India," said Lord Ronaldshay, Sir Valentine Chirol and Mr. H. A. L. Fisher in their joint note,[1] "we are conscious that we touch the outskirts only of a great and difficult problem. . . . We cannot expect simply by" [service reforms] "to cure the grave evils of the existing system. Indeed, we realise that our proposals can only fully effect their desired result if those evils are attacked and defeated by the collective and persistent efforts of British and Indian reformers, working upon lines wider than those permitted by the terms of our reference." In other words, these three members of the Commission felt that the service system, as it applied to university teaching, ought to be considered in conjunction with the whole scheme of university reform. Mr. (now Sir Mahadev) Chaubal went even further than his colleagues.[2] Profoundly impressed by the deficiencies of the existing educational system, and especially by the fact that "a great part of the present college course is taken up with what should more appropriately be in the secondary schools course," and inclined to believe that "the whole object for the constitution of a department of education in the State fails owing to this flaw in the present system," he urged "the appointment of an educational commission which will take evidence and settle the proper lines on which secondary and higher education should be run." It would appear that in Sir Mahadev Chaubal's judgment, and perhaps also in that of Lord Ronaldshay, Sir Valentine Chirol and Mr. Fisher, any reform of the service system on its university side could only be provisional, until it was dealt with in conjunction with a large project of reform in secondary and university education.

104. The reforms proposed by the Public Services Commission were, in fact, based upon the assumption that the affiliating system "will probably continue for some time to come to be a feature of

[1] Report, Volume I, page 107.
[2] *Ibid.*, page 111.

the educational system of India[1]" though some at least of the Commissioners felt that this system "tends to reduce all intellectual energy to the level of the worst-equipped college, and to substitute success in a competition for that preparation for the higher purposes of life which is the supreme end of education."[2]

105. The service method of appointment for university work lends itself well enough to a system wherein each Government college is a distinct and self-contained institution, and all are engaged in work of the same kind. But as soon as the isolation of the colleges begins to be broken down, as soon as they cease to be cut to a single pattern, and begin to specialise, each playing its part in a co-ordinated system, inevitable difficulties must arise. Co-operation on any large scale between Government and non-Government colleges in teaching work is rendered difficult. In the recently established post-graduate system in Calcutta the utilisation of members of the educational services for university work was difficult to arrange. The transfer of Government officers from one college to another, which is inevitable under the service system, has caused many serious inconveniences in the organisation of this co-operative work. Thus, even in the beginnings of the development of a system of university teaching, the service organisation has presented obstacles. These must become still greater in any large expansion of these beginnings, such as we shall propose in later sections of this report.

106. It is not unlikely that, had the Public Services Commission been free to consider the possibility of a large development of teaching universities, and of a reconstruction of the affiliating system, such as we shall propose, they would have been ready to recommend more drastic changes, and would have given greater prominence to some of the remarkable evidence which was laid before them, by many members of the Educational Services themselves, as well as by others.

107. Thus Mr. J. C. Godley, Director of Public Instruction in the Punjab,[3] "disliked the system of separate services altogether, and he thought it would be possible to run Government colleges without such a system. ..... He disliked the principle of unifor-

[1] Report, Volume I, page 108.

[2] *Ibid.*, page 107.

[3] *Ibid.*, Volume, XX, page 53, para. 83,701.

mity in the very various educational appointments which now existed. The alternative lay between having rigid terms, as at present, and having more elasticity and variety."

108. Again, the late Mr. W. H. Sharp, Director of Public Instruction in Bombay,[1] was anxious, in college appointments—

"to do away with the service organisation, as at present in vogue, and to attach the pay to the chair and not to the individual. There would be a chain of appointments, rising from lecturerships to junior professorships, and so to senior professorships....The idea was that a European would always come out as a senior professor, but that a ladder of promotion would be constructed for the Indian. No junior professors would be Europeans, as the pay offered would not attract men from Europe.....The essential difference between this scheme and the present one was that under it an Indian could rise by merit to a senior professorship." Mr. Sharp also suggested that in subjects in which research could be effectively carried on in India, "it might be wise at times to engage for a short period of years the services of distinguished scholars —who would furnish a considerable stimulus to the development of their own particular studies;" the service system, of course, renders this impracticable. Again, in regard to principalships, Mr. Sharp noted that "at present it is usual for professors to be promoted to the principalship by seniority, and it is an unusual occurrence for any one to be passed over. Indeed, it is looked upon as a humiliation to be so treated. The defects of such a practice are obvious. Principals should be appointed, as now, from among the professors, but by merit, though in exceptional cases an educationist from outside might be selected."

109. Dr. Mackichan,[2] the veteran Principal of Wilson College, Bombay, and three times Vice-Chancellor of Bombay University, though he did not suggest any very drastic changes, emphasised a point of view which it is not always easy for members of a Government service to keep in mind:—

"In his own experience educational officers had had a free hand in all matters relating to the University, but he gathered that in recent years they had received instructions as to the mind of Government on certain matters. Their influence would be very much greater if they were known always to be speaking their own minds rather than acting as mouthpieces for official policies. That was one of the things he was thinking of when he recommended that in the educational department Government should be seen as little as possible. He was also anxious that the students should see in their teachers, not officers of Government, but men who were interested in them personally. The old Indian conception of a teacher was not at all reproduced in the new conditions, which had nothing of the sacred personal relationship of former days."

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[1] Report, Volume XX, page 212, para. 84,357.

[2] *Ibid.*, page 236, para. 84,582.

110. The Director of Public Instruction in Bengal made yet another point[1]:—

"There were disadvantages in appointing university professors to a regular Government service. For example, if there was a university at Dacca, and its professors were members of a Government service, then their appointments, subject to consultation with the Council of the University, would rest with the Government. Supposing a vacancy occurred, and the Council recommended that a certain gentleman should be appointed to it, it would then be the business of the central office to consider whether the appointment was justified in view of the claims of all sorts of other people, who perhaps had never had anything to do with the Dacca University, but who, because of their position in the service, might justly claim to be considered for the vacant post. This would lead to friction. Again, the people who might be expected to come out to do university work would probably be of middle age, and would not easily settle down under the sort of bureaucratic administration which prevailed in a service."

111. Sir Alfred Bourne,[2] Director of Public Instruction in Madras, went even further than his colleagues:—

"He felt personally that the time was coming when teaching posts should not be Government posts at all.[3].... For university work there was something rather mischievous in the idea of a service at all, and the system of a pensionable Government service for professors was distinctly an unsatisfactory one.[4]. . . . A college would be better if managed by an educational body, not only from the point of view of recruitment, but from the point of view of the whole management."[5]

112. The quotations might be extended; but we have quoted enough to show that the existing organisation of the service system, in its application to university work, is condemned even by the official heads of the service itself. The criticisms are, indeed, so trenchant that they could not be met simply by a reorganisation of the service system as such, but only by a reconstruction of the whole university system, such as lay beyond the reference of the Public Services Commission.

113. In the attempt to meet some of these difficulties, the Commission proposed the establishment of twenty professorships which were to be highly paid, and were to stand outside of the ordinary service grades. But they could not make up their minds as to the relation in which these chairs should stand "to the existing machinery of higher education in India." Three modes of dealing

[1] Report, Volume XX, page 113, para. 83,458.
[2] *Ibid.*, pages 170-173.
[3] *Ibid.*, para. 83,924.
[4] *Ibid.*, para. 83,934.
[5] *Ibid.*, para. 83,959.

with them were suggested; one that they should be attached to Government colleges, a second that they should be attached to a new central institute of arts and science for higher training, to which intending university teachers would be encouraged to resort, and a third that they should be placed under the control of the existing universities. The Commission could not make up their mind between these three alternatives, "in view of the fact that the terms of our reference cover only the public services, and do not extend to the university organisations."

114. In a letter which was circulated to the provincial Governments, and also published,[1] the Government of India dealt very frankly with the whole problem raised by the Public Services Commission, and showed that it recognised the difficulty of applying a service system to university work, and the need of considering future university developments before reconstructing the system. We quote the most important passage of the letter :—

"A further criticism of the proposals is that they are not adapted to the general trend of Indian educational policy, at any rate in the region of higher education. The progress of the Indian universities in the matter of higher teaching, both in the number of students attending the classes, and in the specialised nature of the courses, demands more and more the assistance of highly specialised scholars, and a certain measure of concentration of institutions. In paragraph 45 of their educational resolution of 1913, the Government of India declared their preference for the teaching as distinguished from the affiliating university. The proposals of the Dacca and Central Provinces Universities Committees, the Patna University scheme now under consideration, and the recent changes made in Calcutta for post-graduate teaching, are all in the direction of an increased university control over certain forms of teaching, and of a certain measure of concentration. Should this line of policy be developed in the future, and be extended to other parts of India, it is urged that the establishment of a Government service with its regular conditions of pay, prospects, promotions and transfers, will not be consistent with the requirements either of new unitary and teaching universities, or of reformed affiliating universities. If universities are to conduct certain forms of teaching, they should obviously do so through the agency of their own professors, and not through the members of an outside service.

There seems, therefore, some need for readjusting the present proposals to suit such further possibilities. It is true that there are many difficulties in the way of such a policy, but it would be unwise to embarrass its development, by the reconstruction of the educational services on lines ill-adapted to the requirements of the universities of the future."

115. Another paragraph of the same letter brings out yet more clearly the difficulty of arriving at any satisfactory mode of appoint-

[1] No. 873, dated the 19th September 1916.

ment so long as the present university system remains unchanged. Dealing with the Commission's proposal that twenty special professors should be appointed, and with the three alternative schemes for their appointment, the Government of India say that they "are in agreement with the Commission in thinking that there is a real need for a body of specialists in the several departments of study"; but no one of the three modes of appointment suggested seems to them to be practicable.

"A Government college professor is, and must be, insufficiently in contact with other colleges to be able to influence the higher teaching of the University as a whole; a professor of an affiliating university is almost entirely out of touch with the main stream of college work, and also finds it difficult to conduct research work with the students whose past training he has been unable to influence or guide; and a research institute of the character contemplated by the Public Services Commission is impossible of early realisation."

116. If, then, the service system in its present form is working badly, as the Directors of Public Instruction and the Public Services Commission agree; if a reconstruction of the service system, taken by itself, might, as the Government of India holds, 'embarrass the development' of a better university system; and if none of the three possible modes of appointing specialist professors suggested by the Public Services Commission is likely to work well under the university system as it now exists, it would appear that the organisation of the university branch of the educational services ought to be considered in connexion, and only in connexion, with a scheme of university reform. At this point, therefore, we shall leave the question; returning to it at a later stage, after we have discussed the lines which university reform ought to follow.

VIII.—The use of university credentials as passports to Government Service.

117. One of the most potent ways in which the influence of Government is felt in the work of the University is through the demand of university qualifications—either a degree, or success in a lower examination—as a condition of admission to Government service. This has been the rule ever since the Hardinge resolution of 1844 gave preference in appointments to men trained in western colleges; and the practice has, in a marked degree, determined the character of university development in Bengal, as in other provinces.

118. There seems to be no room for doubt that the desire for admission to Government service is one of the most powerful of all

the motives which attract students to follow the university course. In nearly every high school which we visited we asked the boys of the top classes (all of whom, with very rare exceptions, aim at entering the University) what career they wished to follow. In many cases the majority, and in some cases all but a few, stated that they wished to enter Government service.[1] We have been told that the desire for Government service is now declining. If that is so, its strength must have been amazing indeed before the decline began.

"There seem to be two main factors," says Mr. J. G. Covernton,[2] "which determine the rush to Government service. First, that once an entrance is gained, such service, though not particularly lucrative, means a secure position—almost too secure—and progress, though it may be slow, and limited in range, is fairly certain; also there is a traditional prestige attaching to Government employment, even of a lower kind, which finds no counterpart at any rate in Anglo-Saxon countries. Commerce, engineering and other kindred professions are more speculative....Pension, which accompanies almost all kinds of Government service, is usually conspicuous, in non-official careers, by its absence. Secondly, the large majority of those who enter a university belong to a limited number of castes and classes, few of which have any traditional liking or ability for practical careers in business, or in professions involving a knowledge of applied science."

119. Realising the extreme importance of this question in its bearing on university work we included in our questionnaire the following question:[2] "Do you hold it to be advantageous or the reverse, (*a*) to the public services, (*b*) to the students, (*c*) to the progress and advancement of learning, that university examinations should be regarded as the qualification for posts under Government? Would you advocate the practice, adopted in many other countries, of instituting special tests for different kinds of administrative posts under Government?" The response to this enquiry was remarkable. Of 243 correspondents, 81 are in favour of making university qualifications the sole necessary mode of approach to Government service; 96 are in favour of disregarding university qualifications altogether—except in special cases such as medicine—and of setting up a distinct series of State examinations for the purpose; and 66 were in favour of demanding university qualifications, but of adding to them a further series of State tests. The divisions among our correspondents did not follow any recognised lines of cleavage. Each group in-

[1] See Chapter IX, paras. 82-83.

[2] Question 5.

cluded British administrative officials and teachers, and leading Indian publicists and teachers, both Hindu and Muslim. The answers, moreover, are of the greatest variety, and full of suggestiveness. But before we turn to discuss the points which have been raised by our correspondents, it will be well to obtain a clearer idea of the existing system.

120. A very full and exact memorandum supplied to us by Mr. J. H. Kerr,[1] Chief Secretary to the Government of Bengal, makes one aspect of the position very clear. There are under the Government of Bengal ten distinct services for admission to which a degree is essential, except in the case of promoted subordinates, to whom in most services a number of posts are given. The salaries of these posts vary from Rs. 50 to Rs. 800 *per mensem*. The total cadres of the ten services number 1,961, and the average number of appointments made during each of the last five years has been 101, of which, on an average, 78 were given to graduates, the rest to promoted subordinates.

121. There are also sixteen services for which lower academic qualifications (mostly intermediate or matriculation) are required, with salaries ranging from Rs. 50 to Rs. 1,000.[2] These services included 3,136 posts; the annual appointments during the last five years numbered on the average 236, and on the average 44 graduates were appointed in each year. To these two groups of services, therefore, 122 graduates were, on the average, appointed in each year, and to the lower group of services, on the average, 215 men of lower academic qualifications.

122. Besides these regular services, a certain number[3] of graduates are appointed to upper division clerkships in the Bengal Secretariat, carrying salaries of from Rs. 125 to Rs. 400 *per mensem*; and graduates may also become candidates for the very elementary examination on which lower division clerks (with salaries ranging from Rs. 40 to Rs. 100 *per mensem*) are appointed. All the four lower division clerks thus appointed in 1916 were graduates, and one of the three appointed in 1917.

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[1] Included among the answers to Question 15.

[2] The salary of Rs. 1,000 is given only in the judicial branch of the Provincial Civil Service, to which only graduates are in fact appointed. Otherwise the highest maximum attainable in any of these services is Rs. 750, the higher limit for appraisers of the Customs Department.

[3] We have no precise figures on this point, but the numbers are small.

123. Thus the number of posts under the direct control of the Bengal Government to which graduates are annually appointed is substantially less than 150. In 1918, 2,012 graduates took their first degree in the University of Calcutta; and probably two-thirds of them had entered upon the university course with a hope of getting one of these appointments.

124. In addition to posts under the Government of Bengal there are, of course, also posts under the Government of India, which are open to graduates of Calcutta as of other Indian universities. Such are the posts in the Finance Department, which, alone among all these positions, are awarded on a competitive examination, though the examination is limited to selected candidates. And there are also a number of positions in the provincial branches of some Government of India departments, the most important being the Post Office. We were told in evidence by Mr. G. R. Clarke,[1] (then) Postmaster-General, Bengal and Assam Circles, that to the higher positions of the post office (with salaries ranging from Rs. 200 to Rs. 2,500 *per mensem*) graduates were almost invariably appointed. But there are only from two to four vacancies *per annum* in this service in Bengal and Assam. It is probable that if the average number of Government of India positions annually obtained by Bengal graduates were added to the number of Government of Bengal positions, the total would still be under 150.

125. For all these posts, the university degree is, of course, only a qualification: from the very great number of qualified applicants selection must necessarily be made by other means. The means adopted is that of nomination, and the greatest care is taken in making enquiries about those qualifications of the candidates which no examination can test, but which are often of the highest importance for administrative work. Some of our correspondents do not seem to realise that the university degree cannot be enough by itself—because of the large number of qualified candidates, if for no other reason. Thus one, who writes that "university examination is certainly a better method of recruitment than nomination, which was adopted by Government a few years back," seems to imagine that the degree result might somehow be made to carry with it an appointment automatically.

126. The greatest drawback of the system of nomination is that it leads to a perpetual haunting of the offices by candidates,

[1] Oral evidence printed at the end of answers to Question 15.

to attempts to use all sorts of influence, and to long waiting by men who are loth to abandon hope of appointments. "The trouble is," says Mr. Clarke,[1] "that men are apt to hang about year after year until they are twenty-five years of age." This cannot but be bad for the candidates: it is, says Mr. Satis Chandra Ray,[2] "utterly demoralising ..... as it encourages flattery and scrambling for Government favours." "At present, there seems so much of chance in respect of these appointments", says Mr. M. B. Cameron,[2] "that the bare possibility of selection affects a very much larger proportion of the students, and for a far longer time than is warranted by any reason. The thought that he has even a very remote chance of a nomination exerts a powerful influence on the student's career at college not only in the way of distracting him from the true ends of study .... but also in the dissipation of energy involved in running about to secure recommendations or to cultivate patronage."

127. The formal list of service appointments does not exhaust the possibilities of employment under Government: if it did, the comparatively small number of such appointments available might be expected to have its effect upon the number of candidates. But there are in addition many clerical appointments in Government offices which are not under the regulations of the Secretariat upper and lower clerkships, and to which appointments are made by the heads of the offices. For these positions degrees are found to be useful, not because they are required as a condition of appointment, and certainly not because the kind of attainments which ought to be represented by a university degree is needed for this kind of work, but simply because, as we have been told by officers concerned, the degree forms a convenient and easy way of sifting the large number of applicants. In some measure this applies also to many non-Government offices; it is assumed that the graduate is at least likely to be a better master of English than the man with lower qualifications. Thus the student is encouraged to think that even if his degree does not win for him a place in one of the regular Government services, it may at least help him to obtain a humble clerical appointment.

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[1] Oral evidence printed at the end of answers to Question 15.

[2] Question 15.

128. To this class belong the large number of subordinate appointments in the Post Office—some 4,000 in Bengal and Assam alone, of which 154 were filled up in 1917. The salaries run from Rs. 40 to Rs. 120, but promotion to high rank is possible. Mr. Clarke told us that he is dissatisfied with the existing methods of recruitment, which are very haphazard. As no recruits ought to be taken after the age of 20, graduates are of course excluded. Mr. Clarke urged that an examination was needed, at the age of about 18, which would include English, geography and mathematics: the writing and spelling of subordinates are usually very weak, and their knowledge of geography most indifferent. But, for the purposes of the Post Office, this examination should not be competitive, since the Post Office required in its employés qualities such as cannot be tested in an examination. If such an examination existed, Mr. Clarke thought the Post Office might be debarred from accepting boys who had not passed it.[1]

129. Finally there are, as Mr. Kerr reminds us, "hosts of petty posts in the districts to which appointments are made by local officers without reference to Government. The initial pay of these posts is ordinarily Rs. 20 or Rs. 25, and the maximum to which a man can rise is Rs. 100 or Rs. 120. Graduates are very rarely appointed to these posts, so I have not thought it necessary to obtain detailed statistics relating to them." But even these posts are sometimes filled by graduates; and in any case, since a knowledge of English is required, and since English is as a rule systematically taught only to those who pursue the regular course leading to the university degree, the 'host of petty posts' are mostly filled by men who have advanced some distance on the way to the degree: who have passed the matriculation, or failed at it, or (very frequently) who have passed or failed at the intermediate.

130. Few of our correspondents pay, in our judgment, sufficient regard to the use of the university system as a means of training students for this modest kind of work: when they discuss the mode of appointment to Government posts, it is mainly of the comparatively small number of definite service posts that they are thinking. Yet the fact that, not only for the regular service posts, but also for this great multitude of petty clerkships, some university training has in practice come to be almost necessary, constitutes one

[1] Oral evidence printed at end of answers to Question 15.

[2] Question 15.

of the most troublesome of our problems. "Much of the overcrowding of our colleges," as Mr. W. C. Wordsworth[1] says, "comes about because they have to accommodate students who in other countries would be satisfactorily equipped for the work they contemplate by a school education, perhaps concentrated by a short subsequent course at some such institution as Clark's College." "Many of the students," says Mr. C. H. Bompas,[2] "have no aim higher than a clerkship; and the position is much the same as if the University of London made itself responsible for the training of all the typists employed in the merchant offices in London. Secondary schools should give all the education required for ordinary clerical employment." Mr. Bompas's view is perhaps a little exaggerated; but it contains a substantial element of truth.

131. It is not surprising that these effects of the relations between Government service and university work are regarded with real perturbation by many of our correspondents. "All the evils existing under the present system", says Nawab Syed Nawabaly Chaudhury,[1] "are mostly attributable to university degrees being considered as passports to places under Government service." "In my opinion", says Mr. Justice Seshagiri Iyer,[1] "the deterioration of the Indian universities is traceable, to a large extent, to their endeavour to accommodate themselves to the needs of the public service." Mr. Satis Chandra Ray[1] thinks that the system is disadvantageous to the public services "for the reason that they do not attract the most suitable type of men; to students it is disadvantageous for the reason that they diminish the spirit of learning for its own sake and create a hankering for examination, and not for knowledge, as the only available avenue to the public services; on the progress and advancement of learning its effects are obvious." "The present condition that the university diploma or degree is practically the only means of getting Government posts," says Rai Kumudini Kanta Banerjee Bahadur,[1] "is the greatest obstacle to proper university education in Bengal." "True progress and advancement of learning", says Dr. Tej Bahadur Sapru[1], "must be out of the question so long as a university degree is to be treated as a bridge to a post under Government."

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[1] Question 15.

[2] Question 1.

132. Mr. Rushbrook Williams[1] of Allahabad delivers a strong indictment of the whole system :—

"The association of employment in the public services with success in examinations conducted by purely educational bodies, which may be traced ultimately to the policy of Sir Henry Hardinge, has operated almost as an unmixed evil. At first, no doubt, it fulfilled the hopes of its designers, in assisting the spread of western education, and contributing to the multiplication of institutions where such education was imparted. But since that time, its effects have been truly sinister. So far as the public services are concerned, these effects have been less marked, but it is noticeable that the result has been the exclusion from those services of many youths admirably qualified by birth, standing and force of character to perform all the duties entailed by official employment ... On university students the effect has been lamentable. They have come to regard a university degree as a preliminary to Government service ... They are dominated throughout their university life by their conception of a degree as something with a hard cash value ; and the conception of university training as a means to the fuller development of individuality ..... makes no appeal to them. The whole state of the university system of India, as it exists to-day, is a striking commentary upon the results of associating Government posts with university degrees ... The universities have been too long crushed under the burden of a system which diverts their energies from the pursuit of sound learning to the production of candidates for Government clerkships."

133. Mr. Cuthbertson Jones,[1] Principal of the Agra College, speaks from the point of view of another province, but what he says is, *mutatis mutandis*, equally applicable to Bengal :—

"In the absence of sufficient openings in trade or commerce Indian students flock into our universities, eager to qualify for subordinate posts under Government, or for the law, or, failing these, are prepared to fall back upon a clerkship .... Armed with diplomas, hungry applicants present themselves in shoals for selection to Government appointments. A student who has reached about the highest qualification his university can bestow is often glad to accept a naib tahsildarship, in which he will earn Rs. 60 for perhaps five years, before reaching the *el Dorado* of a tahsildarship, where he may hope to earn ultimately Rs. 300 or Rs. 400 *per mensem*. If our university diplomas are worth anything at all, they deserve higher rewards than these .... The fact is that the inducements offered by Government in the first instance to induce students to attend our universities have been persevered with after the need for them has ceased to exist."

134. For these or similar reasons no less than 96 of our correspondents advocate the distribution of appointments solely on the basis of special tests conducted by Government, independently of the universities. Thus Dr. Hiralal Haldar[1] says that "university examinations should not be regarded as the qualification for

[1] Question 15.

posts under Government. I am certainly of opinion that special tests for different kinds of administrative posts under Government should be instituted as in many other countries. All appointments under Government should be thrown open to competition." Rai Bahadur Bhagvati Sahay[1] urges that the bugbear of reduplicated examinations ought not to be allowed to stand in the way of this reform. "It is the horror of special examinations," he says, "and the belief that general culture and training of any sort will make one fit for any special profession that one may have to take to as 'Hobson's choice,' which are responsible for the inefficiency of university culture and training, and for the inefficiency of the various services."

135. The proposal for a special series of tests has been most fully worked out by Mr. F. J. Monahan[2] in a carefully thought out memorandum.

"There are certain Government posts," he says, "which it will be found desirable to fill by the appointment of men of mature years, chosen in different professions— judicial and medical appointments may be filled respectively by the appointment of practising lawyers and doctors, engineering appointments from among engineers, and so on. In such cases, the candidate may have qualified to practise as a lawyer, doctor or engineer, as the case may be, by possession of a university degree, but his qualification for Government service will not be the degree alone. It will be the degree *plus* the experience, reputation and eminence which he has gained in the practice of his profession.

To other posts and services candidates must be admitted at an early age; and, for such posts and services, the best method of recruitment in Bengal is, I am convinced, that of open competitive examination, subject to certain safeguards. The present system of selection from among candidates who have passed university examinations is most unsatisfactory. I think that competitive examinations for admission to the public services should be in charge of a permanent commission, and that, before admitting any candidate to such an examination, the commissioners should satisfy themselves, as far as possible, (*a*) that he is of good moral character, (*b*) that he is physically fit, and (*c*) that he has had a proper education. The other safeguard which I would suggest is an arrangement for securing an adequate proportion of Muslim candidates ... by filling, from time to time, a certain number of appointments by means of a competitive examination open to Muhalmans only."

136. The same view is supported by Mr. E. F. Tipple[1] of Roorkee, who says that "in India the time seems ripe for the formation of a body corresponding to the civil service commissioners

[1] Question 15

[2] *Ibid.* The whole memorandum should be read.

at home, whose duty it would be to conduct examinations for the Indian public services in all those cases where it may be decided to obtain recruits by examination in India." Mr. W. C. Wordsworth[1] also "would advocate something like the civil service commission for the examination of candidates for the higher services after preliminary selection."

137. The objections to this proposal assume many forms. Thus Dr. Abdurrahman[1] asserts that "if students are permitted to walk round the University and enter public and administrative services from other routes and with different passports, the universities will have to close. It will mean the ruin of the work of a century." This, of course, implies that the candidates for these examinations would not need to go to the University or its colleges to obtain the training necessary to equip them for success in the new competitions. No doubt this would be true in regard to the lower civil service examinations; but, if we may judge by the experience of other countries, it ought not to apply to the higher grades. A kindred objection is based upon the fear that the establishment of special examinations would "encourage the growth of institutions preparing pupils for the special tests—'crammers' in fact."[2] "Success in an examination," says Mr. A. I. Mayhew,[1] "might be gained by private tuition, or by a course in the cramming establishments that would undoubtedly arise, and would afford no guarantee of anything except a certain mental agility." This is a real and great danger which, if not guarded against, might go far to render futile any scheme of educational reform, and it affects the schools quite as much as the University. Mr. Monahan recognises this danger, and endeavours to guard against it by suggesting that the commissioners should be required "to satisfy themselves that candidates had received a good education." "This," he says, "would be some check on cramming establishments. The commissioners might refuse to admit to the competitive examination candidates prepared at institutions not approved by them."

138. The ground of these fears is the belief that students who aimed at Government service would no longer resort to the Univer-

[1] Question 15.

[2] Mr. S. W. Cooke, in answer to Question 15.

sity; and it is in answer to this fear that many of our correspondents lay emphasis upon the value of a university education for men in high office, and therefore conclude that something like the present system should be maintained. The very opposite belief—the belief that the University would continue to provide all the training—lies behind another objection. Thus Mr. A. H. Mackenzie[1] says that "open competitive examinations would dominate our curricula; for it would be impossible for schools and colleges to resist the pressure which would be put upon them to adapt their syllabuses and methods of teaching to ensuring the success of their students in the examinations for entry to a profession which, under present economic conditions, offers a more certain means of livelihood than any other." And Mr. H. J. Maynard,[1] speaking from the experience of the Punjab, where competitive examinations for the Provincial Civil Service have long been held, contends that—

"a real competitive examination held in India for such a service as the Indian Civil Service would entirely dominate the course of higher education, and, unless the universities took to teaching its subjects and to paying a good deal of attention to the probable requirements of its examiners, students would turn elsewhere, and cramming establishments would be thronged ..." "For the present," he concludes, "and particularly in the Punjab, I see no escape from the conclusion that university examinations must continue to be regarded as the qualification for all the higher administrative posts."

139. A yet more fundamental objection is that, as Khan Sahib Maulvi Kazi Zahiral Haq[1] puts it, "the competitive system of examination for filling up posts is not at all suited to the conditions prevailing in Bengal." The same view was taken, in a full and careful argument, by the Government of India in their education resolution of 1904; and this judgment is supported by the Public Services Commission, who have discussed in an interesting passage[2] the causes which make for success in a competitive system. They recognise that what is needed for a good public servant is not merely that he should have been able to remember on a given day a certain number of perhaps disconnected facts, but that he should have undergone a long and systematic discipline under conditions calculated not merely to fill his memory,

[1] Question 15.

[2] Report, pages 29 and 30.

but to teach him independence and initiative, and to cultivate those gifts of character that will help him in dealing with his fellow men. If the competitive system has been successful in Britain, it is because, with all their defects, the British schools and universities do provide training grounds of this kind, and because the schemes of the competitive examinations have been adapted to the programmes of study of the best universities and schools, and have therefore "secured for the service of the State the best products of the educational system of the country"—men who have been trained for life, and not merely for examinations.

"Conformity with the regular educational machinery of the country," the Commission continue, "is desirable, partly because under such conditions a larger number of candidates will be forthcoming than would be the case if the examination required special preparation, but mainly because a well organised school or university course is the most likely means of producing the mental and moral characteristics which are required in a public servant. Such courses have an educative value much superior to that acquired during a course of special preparation for an examination, because in every good school and university there are formative influences, both inside and outside the class-rooms, which help to mould and develope character ... The development of education in India has not yet been such as to satisfy the second condition which we have recognised as necessary to the success of the competitive system."

140. The Public Services Commission are thus opposed to a purely competitive system in India, precisely because the educational system has not yet been so developed as to ensure that such a system would produce the best men available. But, they add, "the arguments against competitive examinations ... are valid only in the present condition of education in India. When schools and colleges there are improved, and when education is more equally diffused among all communities, it may well be possible to introduce a system of competitive examinations in India with the same good results as in England."

141. Influenced, though perhaps not wholly convinced, by such considerations as the above, 66 of our correspondents recommend that while a system of competitive examinations should be established, it should be closely linked with, and made dependent upon, the educational system of the country; the attainment of a given educational stage being required for admission to the different grades of examinations; a degree, and possibly (as some

urge) a degree including specific subjects,[1] being demanded for the higher grades, a satisfactory course at a good school for the lower grades. "The several tests," as Mr. Harakanta Bose[2] urges, "should, as far as practicable, be made to correspond to the different university examinations."

142. Several correspondents urge that the kind of study pursued in college and university should be more closely related to the students's future work. Thus Mr. Radhikanath Bose[2] argues that—

"a man who has made a special study of psychology and ethics may rightly be appointed to a judicial office, but an M.Sc. in chemistry should not be allowed to waste his hard-acquired knowledge of science in detecting fallacies and sifting evidence as a judicial officer. So a man who has won his degree in economics may well find a place in the revenue department, but an M. A. in Sanskrit would be of little value there. If Government, therefore, would lay down a set of rules distinctly defining the nature of qualifications necessary for appointments in different departments, it would, I believe, do good to both parties."

That is to say, there should be a real correspondence between the character of the curriculum and the requirements of the service.

143. It is perhaps especially in regard to the humbler appointments, clerkships and the like, that a system of this kind, related to an improved organisation of secondary education, is felt to be desirable.

"The introduction of special tests for special classes of minor appointments under Government", Dr. C. E. Cullis observes, "would be advantageous if it involved an improvement in secondary education without any prejudice to university education. The retention in secondary schools of students who do not aim at, or are insufficiently qualified for, a complete university training would tend to enhance the efficiency of university teachers."

144. On such a basis, as many of our correspondents urge, the institution of a system of special tests linked with the existing educational system would be advantageous at once to the services, to the schools and colleges, and to the students.

"With specially devised tests of the kind I have in view ....." says Mr. M. B. Cameron,[2] "the student's way would be much clearer. If he determined to enter himself as a candidate, his course of preparation would run probably to a great extent parallel to his school or college studies, and

[1] Thus Mr. Radhakamal Mukherjee urges that "graduates entering the public services should be required to take up general and special subjects in political science, political economy and sociology." He adds further details: answer to Question 15.

[2] Question 15.

would mean increased application to them. What extra preparation and drill were required would be something confined to a limited time, after which his chance of an appointment would either disappear altogether, or be increased to such an extent as would justify special effort."

145. Mr. H. Sharp[1] has worked out this idea of the correlation of a system of tests for service appointments with the educational system more fully than any other of our correspondents :—

"I would advocate special tests for different kinds of administrative work. Such a test would be not merely by written papers, but should involve an investigation of a candidate's records and antecedents, and an oral examination. The possession of some standard of attainment at school or college (*e.g.*, for certain branches the possession of a degree) would also form a necessary qualification for admission. The actual subjects of examination would be few, and should have some bearing on the work which the candidate will subsequently have to perform. Some of the examinations might be conducted by a central board; but, generally there should be boards formed under the local Governments, or under groups of them. Such boards should contain professors connected with the various universities, and local Governments might well arrange for some interchange of examiners ... It would be well if other public bodies utilised these examinations as tests for administrative or professional work."

146. In the principle that Government posts should be filled after special tests, but after special tests which should be closely related to the educational system of the country, and which should require that the candidate should have attained the appropriate stage in this system, our correspondents seem to have found a mode of reconciling the demands of those who claim that a university education is an all but essential qualification of high officials, with the demands of those who complain that the University is now degraded and hampered by the necessity of providing training for hosts of candidates for clerkships and other humble offices. But the need which drives these boys into the University —the need which leads Government officers to stipulate for a university training for work in which no university training ought to be required—must somehow be met if this suggested solution is to be practicable. This need is due to the absence of an efficient system of higher secondary education. The training afforded by the schools must be made good enough to suffice as an equipment for these minor offices.

[1] Question 15.

147. On this point useful guidance comes from Dr. Brajendranath Seal[1] :—

"The quantity and quality of English writing, speaking and reading, together with information about things in general that are needed in Bengal to-day for the intelligent pursuit of any vocation in life that can satisfy the *bhadralok* class in Bengal (be it school-teaching, office duty, mercantile business or technical training in any scientific industry) cannot be acquired before the age of nineteen or twenty years, that is, about the time, when the average Bengali boy finishes the intermediate course; and it is certainly an advantage that we should have an army of intelligent subordinates with a grounding (not grinding) in the essentials of general education."

148. It may be noted that the age at which Dr. Seal considers it to be possible for Bengali boys to acquire the kind of knowledge necessary for subordinate service approximately corresponds to the age at which Mr. Clarke[2] would wish to have an examination test for the admission of subordinates to the postal service; and that this age is, in each case, a stage above that of the high schools. Dr. Seal recognises that the high schools cannot afford the necessary preparation; and what he recommends is that, "when and where the additional resources in men and money are ample, so as to ensure a high standard," there should be established "intermediate colleges as a new wing or extension of the high school foundation." And, he goes on, "though I would not merge the intermediate college in the high school, I would consider the former only as a higher school, *i.e.*, as the terminus of a liberal general education."

149. Here would be the missing link in the educational system of Bengal: an institution at which boys could obtain the kind of training (moral as well as intellectual) necessary to qualify them for the subordinate ranks of the services, without being driven on to flood and swamp university classes for which they are not ready, or to take (as many of them now do) a mere fragment of a university course that ought to be regarded as a whole. By this means the adaptation to the educational system of a logical and clearly defined system of tests and qualifications for admission to the public services would be made practicable; and the evils which many of our correspondents have deplored as arising from the present mode of appointment would be substantially rectified.

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[1] Question 15.

[2] See above, para. 128.

150. We do not, at this stage, put forward our own recommendations on this very important subject. Our purpose, in this as in the foregoing chapters, has been merely to explore the present conditions, and the suggestions and criticisms to which they have given rise, in order that they may have due weight in the consideration of our problem as a whole.

CHAPTER XXIX.

Inter-University Relations.

I.—The exclusiveness of the present system.

1. For historical and other reasons, the older universities of India are identified with the territorial limits of the province or provinces whose needs they were originally designed to serve. In so far as an Indian province is self-contained in its government and organisation, it has been assumed that in its functions and outlook an Indian university should also be self-contained. The University of Calcutta, which at its foundation was the only university for northern India, has therefore experienced successive curtailments of its territorial area, as new administrative provinces have been called into being.

2. The development of the Punjab and the United Provinces as administrative areas demanded the creation of the Punjab and Allahabad Universities in 1882 and 1887 respectively, thus limiting the range of the activities of Calcutta University. But affiliation was still retained with Calcutta by certain colleges situated in these provinces and in the adjoining British territories and Native States.

3. The Universities Commission[1] of 1902 reported that the supervision of affiliated colleges "could hardly be made effective at a great distance from the centre and that the local limits of each university should be more accurately defined." The Commission therefore recommended that "steps should be taken to remove from the Calcutta list the affiliated colleges situated in the Central Provinces, the United Provinces, the Punjab, etc., and the colleges in Ceylon which send in candidates for the Calcutta examinations may be transferred to Madras, unless the colonial authorities are prepared to make more suitable provision for their needs."

4. Under the terms of the Act of 1904 "the Governor-General in Council may, by general or special order, define the territorial limits within which, and specify the colleges in respect of which,

[1] Report, para. 27.

any powers conferred by or under the Act of Incorporation or this Act shall be exercised." An order issued under the terms of this clause specified as the area of the jurisdiction of the University of Calcutta the territories which are now included in the Presidency of Bengal and the provinces of Burma, Bihar and Orissa and Assam.

5. The policy of territorial limitation was followed in the Patna University Act in 1917, consequent on the creation of the new province of Bihar and Orissa. The Act provided that "no university in British India other than the Patna University shall, after the commencement of this Act, admit any educational institution of the province of Bihar and Orissa to any privileges whatever, and any such privileges granted by any such other university to any educational institution in that province, prior to the commencement of this Act, shall be deemed to be withdrawn on the commencement of this Act." The Patna University, thus organised on the affiliating pattern, is a self-contained university designed to meet the needs of the province of Bihar and Orissa and these needs alone.

6. At the present day the territorial limits of the provincial universities of India are as follows :—

University.	Territorial limits.	
	Provinces (including any Native States under their political control and any foreign possession included within their boundaries).	Native States or British Colonies.
Calcutta . . .	Bengal, Burma and Assam .	.....
Madras . . .	Madras and Coorg . . .	Hyderabad and Ceylon.
Bombay . . .	Bombay and Sind . . .	Baroda.
Allahabad . . .	United Provinces of Agra and Oudh, the Central Provinces (including Berar) and Ajmer-Merwara.	The States included in the Rajputana and Central India Agencies.
Punjab . . .	Punjab, North-West Frontier Province, British Baluchistan and Delhi.	Kashmir and Baluchistan.
Mysore . . .	.....	Mysore.
Patna	Bihar and Orissa . . .	.....

7. The jurisdiction of Calcutta University, including the power of affiliating colleges, extends over three provinces—Bengal, Burma

and Assam—containing 376,400 square miles and 65,000,000 inhabitants. Within this area the University of Calcutta has a monopoly, no other university being permitted to affiliate a college or recognise a school, and conversely the University of Calcutta can have no dealings with colleges or schools outside her boundaries. A student is free to choose his university, provided that he satisfies the conditions of admission to the institution which he desires to attend; but, as will be shown later, provincial restrictions sometimes render this choice difficult in practice.

8. These territorial limits have been deemed necessary in the past, mainly for the following reasons. In the first place, the functions of the older universities in India have demanded them. So long as each of these universities is engaged, subject to Government control, in administrative rather than teaching functions, it necessarily follows that its boundaries should be as far as possible co-terminous with those of a province. And again, as each university has relations with a number of colleges, its regulations cannot effectively be enforced if the colleges are too numerous or too remote for frequent supervision. Inspection becomes difficult; the distribution of examination papers is complicated; and the authorities of a distant college have little opportunity of taking an active part in the deliberations of the University. The bond between the two tends to be based solely on examinations and prescribed courses.

9. The self-contained provincial university affords some administrative conveniences. Because it exercises direct control over Government colleges, gives grants-in-aid to others, and is deeply interested in the secondary school system, Government is necessarily hampered in carrying out these duties if the affiliation and inspection of colleges within its area and the recognition of schools situated within its territorial jurisdiction are in any respect under the authority or in the hands of another Government and university. In consultation with its own university, a local Government has opportunities of reviewing the financial and educational resources of the province and of mapping out a policy of future development.

10. Such was the opinion of the Government of India: "It is very necessary," runs its resolution on educational policy of 1913, "to restrict the area over which the affiliating universities

have control by securing a separate university for each of the leading provinces in India." It was doubtless for this reason in particular that the Patna University has been constituted, that plans are being laid for new universities in Burma and the Central Provinces, and that suggestions have been made for an affiliating university in Assam.

11. Important though these considerations undoubtedly are, it is clear that the rigidity of these somewhat artificial restrictions and the spirit of exclusiveness which they foster are becoming irksome to many, especially to the teachers. Mr. Arthur Brown[1] of the Cotton College, Gauhati, feels the need of a closer connexion between the several universities:—

"It is most desirable that the various Indian provinces should not be water-tight compartments in matters of education, but that teachers should move from one to another much more freely than at present. Without that, those who are unfortunate to be away from certain centres are doomed, and it is not to the interests of higher education that they should feel doomed."

Mr. Brown is probably referring in particular to the service problem which has already been discussed in the preceding chapter of this report, but his remarks have also a general application. The provincial barriers, and also the Government service system which confines its officers, almost without exception, to a particular province, have prevented much coming and going in the university world. The sense of isolation has reacted unfavourably both on the universities and on the teachers. We agree with Mr. Brown that the prospects of the teachers should be widened by hopes of more fruitful service, if necessary, by promotion and transference to other universities. And a practice of inbreeding is also unhealthy for education generally. A university or college which depends almost entirely on the service of her sons is in serious danger of stagnation and extreme conservatism. An infusion of new blood is always desirable.

12. During recent years the University of Calcutta has made efforts to combat this evil. It has attracted to its service scholars of repute from other parts of India; and the Bengal Government have been fortunate in the inclusion of some talented Indians from outside the Presidency among its educational officers. Bengal has also been willing to give the services of her scholars to other

[1] Question 14.

provinces; for we have met a number of Bengalis serving under other universities. The newer universities at Benares and Mysore have also gone far afield in the recruitment of their teaching staff, and with successful results.

13. The Calcutta Post-Graduate Committee[1] emphasised the importance of a close relationship between the universities of the Indian Empire and made several suggestions :—

"There should be frequent communication between the various universities, which communication might be encouraged by the employment, from time to time, of distinguished scholars from outside as temporary lecturers and examiners.....Advantages might also be taken of inviting men of practical experience, not only from Calcutta[2] but also from elsewhere, to deliver courses of lectures under the terms of recruitment which we have proposed."

But examiners, as well as lecturers, may be drawn from other universities. The value of the help which a university derives from the appointment of external examiners is discussed elsewhere in our report.[3] Temporary lecturers serve not only to give a new angle of vision to the students, but also to introduce fresh ideas in the organisation and conduct of teaching. In recent years, the University of Calcutta has enlisted temporarily the services of many distinguished scholars from other parts of India and also from other lands. Calcutta scholars are also available in the same capacity to other universities; during our visit to Madras, Dr. (now Sir) P. C. Ray, Professor of Chemistry in the University of Calcutta, lectured to large audiences in that city.

14. There already exist a certain number of associations whose objects are to stimulate research, to improve methods of study and to bring scholars of different provinces into contact with each other. During the course of our inquiry, the Science Congress held its annual meeting at Lahore under the chairmanship of Dr. Gilbert Walker; and a library conference under the direction of Mr. Sharp was summoned to the same city by the Government of India. Professor Hamilton invited a number of economists to meet together in Calcutta in January, 1918, to discuss matters of common interest.

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[1] Report, page 18.

[2] Persons engaged in other than educational work, who are prepared for a remuneration decided on by the University to deal with special subjects in which they are authorities. Report, para. 14(*d*).

[3] Chapter XVII.

15. The Indian Mathematical Society, whose proceedings revealed the mathematical ability of Mr. Ramanujan, the first Indian Fellow of the Royal Society, has also done similar work for a number of years. The following statement has been addressed to us by Mr. A. C. L. Wilkinson, Professor of Mathematics, Elphinstone College, Bombay, who has done much to stimulate mathematical research in India :—

"The Indian Mathematical Society was started in 1908. It has a central library in Poona; and books and journals are circulated to members on request. The membership in 1916 was 163. The majority belong to the Madras Presidency, but we recruit largely in the Bombay Presidency, the Punjab, and a few from Ceylon, Burma and other parts of India. A bi-monthly journal is published. Meetings of the Society are held biennially, the first being held in Madras in 1916, at which 70 members were present."

Provincial scientific societies, or societies attached to particular universities, are not incompatible with the maintenance of great associations representative of the whole of India. But we should regret any tendency to particularism which would weaken the efforts of associations planned upon a more comprehensive scale.

16. It is strange that, though certain associations and public spirited individuals have taken the initiative and have striven to bring together workers from different fields for the discussion of matters of common interest, the universities themselves have done very little in this direction. In recent years there have been numerous educational conferences to consider different aspects of the work but, so far as we know, there has been no conference of universities. Even at a time when new universities are contemplated and university problems are under general discussion, such questions as the development of post-graduate studies, the introduction of a school final examination, reciprocal recognition of examinations and the appointment of external examiners have not been discussed by university representatives in conference. Consultation upon these and other points would have suggested new forms of inter-university co-operation, would have helped the formation of public opinion upon many difficult problems and have lessened the possibilities of misunderstanding and of friction.

17. The Calcutta Post-Graduate Committee[1] also laid stress on the importance of a friendly understanding between universities

[1] Report, para. 24.

in the matter of research and post-graduate instruction in the following terms :—

"In making these proposals we are aware of the fact that other Indian universities also have been improving their arrangements for higher teaching, and there are, in addition, a number of Government institutions and learned societies keenly interested in the work of research. In the course of this report we have laid emphasis on the necessity for co-operation and sympathy between all those who are engaged under the University. We would now go further and suggest that scholars living in different parts of the Indian Empire should be brought into close relationship one with another. It may be hoped that the bonds of union that result from a common pursuit of knowledge may be the means of bringing races and peoples into harmony with each other. In this task the University of Calcutta should not be behindhand. If India is to add to the stock of human knowledge, she cannot afford to dissipate her energies or allow her scholars to work in isolation. No inter-university rivalry should be permitted to interfere with the prosecution of the work under the most favourable circumstances. If, for these reasons, Calcutta scholars may have to go far afield, so also should Calcutta be prepared to welcome from elsewhere scholars wishing to avail themselves of the facilities provided in this city."

18. In his report on Bombay University written in 1913, Sir Alfred Hopkinson wrote these words :—

"I am impressed with the desirability of devoting attention specially to those subjects which can be studied in India better than in other places, in which research can be carried on more effectively here than elsewhere ; which for want of a better word may be called, 'orientalia.' To economics and economic history with special reference to India, this principle applies. Other subjects suggest themselves as coming within it ; for example, Indian history, anthropology, including archæology, the history of Indian thought (literature and philosophy) and philology. What subjects exactly should be taken up and how they may be divided will depend partly on the special qualifications of the men who may be found available."

19. To this list may be added the scientific investigation of industrial and commercial problems. In this field also one part of India may offer advantages and opportunities superior to those afforded by any other province. For some branches of technological research and training, Calcutta may be the best centre ; for others, Bombay ; for others, Madras or Cawnpore. But such concentration would need to be accompanied by the recognition and encouragement of sub-stations of cognate scientific enquiry and by the systematic communication of the results obtained at such sub-stations to the workers at the headquarters of the particular department of research. This could be secured in part through the medium of scientific journals and even more by meetings of scientific men at which fellow-workers in the same or adjacent

fields of science come into personal association. But for effective combination something more is required. It will probably be found desirable to develope some form of central body possessing expert knowledge and administering funds which would enable it to stimulate at every different centre those lines of research most needed at the time for the solution of technological problems.

20. It would not be desirable, in our judgment, to attempt any rigid demarcation in the field of scientific research in its applications to industry. But division of labour is necessary and economical. Local conditions will suggest such a division and lead to the establishment of the most highly organised centres of technological research and training in the province where their work will be most closely associated with local industry. Each university should be free to use its own judgment in accepting or declining any private gift which may be offered to it for the establishment of a technological department. Similarly, the Government of each province would resent interference with its liberty of action in such matters. But the advice and experience of a central body, detached from local preference and surveying the needs and resources of India as a whole, would be valued by provincial Governments, universities and private donors alike when considering the advisability of developing new institutions for technological research. And if the central body were in a position to make grants or lend men in aid of such research, its advice would carry greater weight in determining a decision and in preventing either unnecessary overlapping of effort or the multiplication of technological departments inadequately staffed and insufficiently equipped.[1]

21. Territorial restrictions have also proved harassing to the students. In a previous chapter attention has been drawn to the migratory habits of Indian students who, as a class, have no great reluctance to go far afield for their education. The Imperial departments of administration tend to make the transfer of households from one province to another of frequent occurrence, and therefore of students from one university to another. And it may also happen that students may very rightly wish to attach themselves, at some point in their academic careers, to some particular

[1] The Indian Industrial Commission made somewhat similar recommendations in Chapter X of their report. This question is also dealt with more fully in Chapter L of our report.

college or group of teachers. Quite a number of Syrians, for example, come from distant Travancore to Serampore and St. Paul's Colleges, because in the former college there is a department of Christian theology, and in both colleges there is Christian influence which is desired by these students. Subject to the provision that organised courses of study are not lightly interrupted, we feel with Mr. Südmersen[1] that "the way should not be barred to an easy passage from one university to another and that the whole of India should be open to migration."

22. Under the terms of Section 25 (*p*) of the Universities Act of 1904, "the Senate may, with the sanction of the Government, make regulations to provide for the conditions to be complied with by candidates not being students of any college affiliated to the University, for degrees, diplomas, licences, titles, marks of honour, scholarships, and prizes conferred or granted by the University." A summary of these regulations is given below :—

(*a*) *Calcutta University.*—The Syndicate shall have powers in any case to admit to any university examination in any faculty any person who shall present a certificate from any institution authorised to grant certificates by the Governor General in Council or by a local Government, or from such other institutions as may be from time to time recognised for the purpose by the Syndicate, showing that he has attended courses of study, passed examinations, or taken degrees equivalent to those which are required in the case of students of the Calcutta University. Subject to certain conditions a successful candidate in the Cambridge senior local examination is considered to have passed the matriculation ; and, if he has taken honours in the first class, the intermediate examination.

(*b*) *Madras University.*—Holders of completed secondary school leaving certificates (issued under the authority of the Government of Madras) or such other authority as may have been accepted by the Syndicate, may be admitted by the head of an affiliated college to a university course of study ; and when so admitted shall be registered as matriculates of the University. The Syndicate accepts some examinations (which are not named in the Calendar) as equivalent to the intermediate. For the purposes of minimum literary attainments necessary for admission to the courses in teaching and law, the Syndicate accepts some examinations of other universities, but these are not named in the Calendar.

(*c*) *Punjab University.*—The matriculation of any other recognised university (the term 'recognised' is not defined), the final school examination for European schools in India, the Cambridge senior local examination, the higher Oxford local examination, the school leaving certificate examination of the United Provinces, the final examination held in chiefs' colleges and any other examination approved by the Senate on the recommendation of the Syndi-

[1] Question 14.

cate, are regarded as equivalent to the matriculation examination of the Punjab University. Similarly, the first arts or other equivalent examination of any other recognised university are recognised as equivalent to the intermediate examination of the Punjab University. A similar rule also applies to the B. A. and B. Sc. degree examinations.

(*d*) *Allahabad University.*—The matriculation of the Calcutta, Bombay, Madras and Punjab Universities, the senior Cambridge and senior Oxford local examinations under certain conditions, the final examinations prescribed for European schools, the school leaving examination of the United Provinces or of Ajmer-Merwara, the school leaving certificate examinations of Bombay, Burma, Madras, the high school leaving certification examination of Hyderabad State, and diplomas of chiefs' colleges are recognised for admission to the university course. The courses pursued in other universities, whether of one, two or three years, are recognised. The intermediate and degree examinations of Calcutta, Bombay, Madras and Punjab Universities are recognised as equivalents to similar examinations of the Allahabad University.

23. The summary given above is not by any means exhaustive. The object of its inclusion is to give a general view of the principles which guide the authorities of Indian universities in admitting students from outside their territorial areas. In some universities, Calcutta and Madras for example, the tendency is for the Syndicate to decide each case on its merits. Such a procedure involves considerable delay and often vexatious disappointments. Again, very little provision is made by any of the universities for the admission of graduates of other universities for the purpose of post-graduate study and research.

24. In June 1918, the Senate of the University of Bombay passed the following resolutions which are based on the principle of reciprocity :—

"158. The matriculation examinations of the Universities of Calcutta, Madras, Allahabad, and Punjab and the entrance examination of the Mysore University will be deemed equivalent to matriculation at this University, provided the candidate has completed sixteen years of age on or before the 1st of August next following any of these examinations which he has passed and provided also he has passed at such examination in a classical language and science.

159. The intermediate arts and intermediate science examinations of other Indian universities and the University of London will be accepted as equivalent to the corresponding examinations of this University in the case only of those universities which reciprocate with this University in this respect. Where such reciprocation does not exist, the intermediate arts examination will be deemed equivalent to the first year certificate examination of an arts college affiliated to this University and will qualify for admission to the intermediate arts, intermediate science, intermediate commerce, intermediate agriculture, first engineering and preliminary scientific examination classes

of this University and the intermediate science examination will be deemed to qualify for admission to the intermediate science, intermediate agriculture, first engineering and preliminary scientific examination classes of this University.

A student passing the intermediate arts examination of a university reciprocating with this University may join the intermediate science class of this University.

160. The first year examination of the Mysore University will be deemed equivalent to the first year certificate examination of the arts colleges affiliated to this university.

161. In conformity with the principles underlying regulations 158, 159 and 160, the Syndicate shall have power to declare any other examinations of these or any other universities equivalent to the examinations of this University."

25. These regulations are clear and precise. The University of Bombay is willing to reciprocate with other Indian universities and accept their examinations as equivalents to its own, subject to the condition that a matriculate must be of a prescribed age and have passed in a classical language and science. Students of a university which does not so reciprocate will be penalised to the extent of one year, the intermediate examinations being then regarded only as equivalent to the first year certificate examination. Another underlying principle of these regulations is that, while the University defines the conditions of admissibility, the responsibility of admitting students from another university rests with the college and not with the Syndicate. The acceptance of these offers of reciprocity by another university will not entitle its students to admission to a Bombay college, but will allow them to apply direct to a college instead of indirectly through the Bombay Syndicate. Each college affiliated to Bombay University can, if it chooses, give preference to applications of students resident in the Presidency of Bombay. The principle of giving the college responsibility for the admission of students subject to general regulations framed by the University is sound. It is exasperating to a college, as well as to applicants, that obstacles should be placed in the way of its admitting a student who has satisfied the requirements of another university. If, by the efficiency of its training and teaching, a college is able to attract students from a distance, the benefit is shared by the University and that college.

26. It may be objected that facilities for the freer migration of students might be accompanied by a disposition on the part of some universities to attract students from a distance by a lowering of the standard of a degree. The safeguards against this danger lie in

publicity and in the right of visitation by Government. We believe that the danger of such underbidding for students is remote and not more serious than that of a gradual deterioration of standards creeping in unperceived and unchecked in the case of a university shielded by territorial protection and urged by local public opinion to deal easily with the weaker candidates.

27. Apart however from any risk of the wilful misuse of academic privilege or of an abrogation of responsibility to the public interest, new questions of inter-university policy will arise as the universities emerge from territorial limitations. The reciprocal recognition of courses of study as part of the qualification for a degree, the value which one university should be expected to attach to a school certificate accepted by another university as excusing matriculation, the substantial equivalence of standards based in some cases upon a combination of examination results and a teacher's report, in other cases upon examination results alone, are examples of the questions which are likely to arise more frequently in the future than has been the case in the past. The imminence of such questions, and the certainty that the Indian universities will gain by having some authoritative channel through which they may, when necessary, communicate or negotiate with universities in other countries have led several of our witnesses to call attention to the need for a supervising body which would deal with the whole field of inter-university relationships in India. The Rev. Garfield Williams[1] recommends that "a special office with the Government of India should be created with the title of the Bureau of University Education to deal with all questions that concern universities." Mr. Südmersen,[2] though less definite in his suggestions on this point, also thinks that in matters of university policy "considerable power should be reserved to the Government of India."

28. Mr. Sharp[3] has discussed with us both in his oral and written evidence the provision of standardising agencies which would be of two kinds:—

"(*a*) The principal agency would be a board for conducting examinations which will qualify candidates for Government service and certain professions

[1] General Memoranda, page 474; see also Chapter XXVIII, paras. 30 and 31.

[2] Question 14.

[3] General Memoranda, page 447, and Question 15.

..... Some of the examinations might be conducted by a central board; but, generally, there should be boards formed under the local Governments, or under groups of them. Such boards should contain professors connected with the various universities, and local Governments might well arrange for some interchange of examiners.

(*b*) Another agency will result from the informal reciprocity in academic matters which may be expected to establish itself between the various universities. This would take the form of exchange of examiners, consultation regarding curricula, comparison of the results of teaching, etc. A standardising agency of great importance may thus be formed. But it must depend, less upon statutory obligation than upon mutual confidence and the desire to give and to receive assistance. One of its advantages would be the relief it will afford to subsidiary academic bodies and new local universities in the early stages when the material for forming effective facilities will as yet be incomplete.

(*c*) By this means two ends will be gained—examinations for employment will be dissociated from examinations of a purely university character and a standardising mechanism will be instituted for appraising the value of the different universities and counteracting any undesirable tendency to develope highly unequal standards of examination. A subsidiary advantage of this plan is that it will provide a species of external control which can be exercised with the minimum of friction, because the mere result of the test will react upon inferior institutions and will largely absolve Government from the necessity of taking direct action in cases of default in any university. The much-needed element of competition will be introduced into the university system; and that competition will be kept on wholesome lines by the existence of an external standardising agency."

II.—New developments in university policy.

29. For a long time past in India the University has been mainly regarded as a part of the administrative machinery for controlling the educational system. Inspired by this idea, the notion has been widely diffused during recent years that every large province ought to be equipped with a university of its own for this purpose. Plans for the establishment of new universities have therefore been made with the desire partly to cut the ties of administrative connexion with an institution under another Government and partly to provide for the needs of the increasing number of students. This is natural both on grounds of administrative unity and of provincial self-esteem. Where this form of university exists, it seems to us a sound principle that there should be no overlapping of affiliation (as the term is understood in India) between universities; for there are undoubted advantages in avoiding the overlapping of complex administrative machinery from province to province.

30. It might be adduced as an additional argument in favour of the identification of the area of a university with that of a province if each university corresponded to a defined linguistic area, but this is not usually the case. For example, Marathi-speaking Berar is forced to look to Nagpur instead of to Maharashtra; the Canarese-speaking people to the south of the Bombay Presidency are drawn towards Bombay and away from Mysore; and, if an affiliating university were constituted in Assam, the Bengali of Sylhet would be obliged to transfer his allegiance from Calcutta or Dacca to Assamese Gauhati. In the Madras Presidency the Tamil, Telugu, Canarese and Malayalam communities are all included within the University of Madras; in the Presidency of Bombay the Guzarathi, Marathi, Sindhi, Parsi and Canarese peoples all send their sons to colleges affiliated to the same University of Bombay.

31. In his speech on the Patna University Bill in the Imperial Legislative Council, Mr. Sarma drew attention to these linguistic difficulties by the following words:—

"In starting this university—the Government seems to be proceeding upon the time-honoured territorial basis.....

There are some who think that our educational system should be based on the linguistic bases, that people having genius of their own, that people speaking the same language should have a university of their own so that they may develope their special faculties in their own way."

32. But in spite of the growth of the feeling that in the university system of India regard should be taken of communal aspirations and of linguistic divisions in addition to the convenience of following territorial boundaries, the momentum of the older body of opinion is still very strong. The danger lies in thinking of the present pattern of provincial university as the only pattern which can be adopted, and in provincial Governments hurrying prematurely into the creation of a new university before the intellectual resources of the province are adequate to the task, in order to get release from the administrative inconvenience arising from association with an affiliating university in another province. Referring to the latter danger, Mr. Arthur Brown of Cotton College, Gauhati, writes:—

"It may be desirable to relieve the situation in this part of India (Assam by dismembering the University of Calcutta, but the University of Calcutta would remain the only university from which anything could ever be hoped.

It would continue to attract and should attract, students from outside its own proper province ... It would remain the sole chance of youths from a very big part of India getting an adequate education."

And when Assam is ready for university development, the high barrier of the Khasia and Jaintia Hills which makes communication difficult between the two chief regions of the province should be taken into account in designing the constitution of the new university to be created. In short, administrative considerations should be allowed less weight than at present in the decision whether a new university is required, and the purely administrative functions of an Indian university should be deemed of far smaller importance than the work which it may be charged to do for the education of students and the advancement of knowledge.

33. The creation of the Hindu University, Benares, forms a landmark in the history of the Indian university system; for its constitution is the negation of the territorial principle. The University is not designed to meet the needs of one province alone but to draw students from all parts of India. The Chancellor and the Vice-Chancellor come from Southern India; and its teachers and students are by no means confined to the citizens of the United Provinces. It has no monopoly, no privilege. Not even in the city of Benares does it enjoy vested interests, for Queen's College, Benares, is affiliated to the University of Allahabad. Its energies are not diffused by the necessity of supervising distant colleges, nor is its vitality impaired by the embarrassment of administrative duties other than those of organising its own teaching. It is therefore the first Indian university which is primarily a seat of learning and not an administrative organisation.

34. Indian university organisation is thus in a state of transition, and new ideas are jostling with the old. There is little consistency in the different lines of development. The old pattern of affiliating universities within prescribed territorial limits persists in each of the older provinces. It has recently been reproduced (though in a modified form) in Mysore and with less qualification in Bihar and Orissa. Yet Orissa is already planning an independent university of its own. But alongside of this there is a new movement, exemplified in the constitution of the Hindu University, Benares, in the official plans for the Osmania University in Hyderabad, and in the most recent proposals for the Muslim University, Aligarh. This new current of thought in academic

policy aims at freeing universities from territorial restrictions and at allowing the adjustment of their work to needs of another kind.

35. Some of our correspondents have alluded to this departure from the prevailing system. In view of the growing importance of this aspect of university policy, we shall discuss the constructive suggestions submitted by them.

36. A number of our correspondents seem to imagine that a solution of the present difficulties can be found merely by a multiplication of the affiliating universities. But Mr. Mark Hunter,[1] late of Presidency College, Madras, and now Director of Public Instruction in Burma, has realised the danger of establishing new universities of this type. He writes :—

"When times are favourable, the creation of centralised residential universities should be most favourably considered. On the other hand, there appears to be a distinct danger of the 'idea' of a centralised university being used for another purpose, *viz.*, the institution of smaller federal universities made up of fragments of the older federal universities. This sort of thing will only make the idea of centralised universities more difficult of attainment. ..... I deprecate the foundation of any new university, not a centralised university, in India."

37. One outstanding instance of a new type of university appealing to local patriotism is presented by the University of Mysore, which includes the colleges at Mysore and Bangalore, the former devoted to arts, and the latter to science, teaching. We visited Mysore and Bangalore at the invitation of His Highness, the Maharajah of Mysore, and discussed the future of the new University not only with His Highness, but also with the Diwan, the Vice-Chancellor, the Registrar and the members of the teaching staff. The movement for the creation of the new university originated in a healthy desire to break new ground, especially in two directions. In the first place, the work of the first year of the old college course is to be conducted in a few specially selected high schools. In the second place, though to the regret of some of the founders, it was not found possible to establish the University in a single seat, collegiate instruction, instead of being widely dispersed, is concentrated in Mysore and Bangalore, the question whether these centres should ultimately form two separate universities being left to future experience to decide. We believe that the foundations of the new university have been truly laid and

[1] Question 14.

that school boys and college students alike will benefit by the new departure.

38. We agree with Mr. Hunter[1] that the hopes for the future lie in steady improvement, more or less along existing lines, and ultimately in the institution of centralised universities. This view is in agreement to a large extent with the intention expressed in the Educational Resolution of 1913[2] "to create (in addition to securing an affiliating university for each of the leading provinces in India) new local teaching and residential universities within each of the provinces in harmony with the best modern opinion as to the right road to educational efficiency." But the resolution does not indicate precisely how, within the system of an affiliating university, it will be possible to give encouragement to universities of a new type.

39. The deputation of Musalmans who met us in Calcutta went further than Mr. Hunter, both in expressing the difficulties inseparable from an affiliating university which attempts to meet all the needs of a great province and also in suggesting means whereby the localised universities might come into existence:—

"For a long time the reconstruction of a time-worn and patch-work system which has outgrown its utility has been demanded..... No scheme of reconstruction can be useful or beneficial unless it recognises the existence of conflicting ideals and conflicting interests in almost every sphere of life—social, political and religious—among the different sections of the population. The principles and practice of education which might have proved beneficial in a country with uniform people, uniform interests and uniform ideals, must necessarily be modified to suit the special circumstances that exist in this country. We would urge upon you the necessity of giving, in any scheme of constructive educational reform that may have to be drawn, the fullest consideration to the defects and disabilities of every section of the people as they exist at present, without assuming an ideal state of things that ought to have existed .....It is not possible for a single university to satisfy the legitimate needs of 45½ millions of people, considering the fact that centralisation of authority as we have in Calcutta, means the over-concentration of the educational efforts of the Presidency at a single place and the under-estimation of the nature and possibilities of the development of other places as centres of education."[3]

The deputation then proceeded to emphasise the necessity of establishing teaching universities at Calcutta, Dacca and other places such as Chittagong, Rajshahi, Berhampur and Gauhati.

[1] Question 5.

[2] Resolution, para. 5.

[3] General memoranda, page 209.

They admitted that the four latter places might not yet be ripe for such treatment and therefore recommended as a transitional arrangement the establishment of a University of Bengal.[1]

40. In the reorganisation of university education in Bengal it is necessary to find some accommodation between these conflicting principles, and at the same time to keep in view a goal of future achievement. For many years the University of Calcutta must continue to discharge many of its older provincial obligations. But in the vast area which it serves there is room and need for universities of a new type; and the University of Calcutta, while necessarily remaining under some of its present obligations, should be freed so far as possible from the shackles which a rigid territorial system now imposes on its organisation, and be enabled to make a wider appeal to the whole of India. We would especially urge that by the mutual recognition of both courses and degrees Calcutta and the other Indian universities should stimulate the free migration of students from one university to another, especially for post-graduate work and research, and for technological teaching. Such mutual recognition should in all cases be a matter for inter-university arrangement.

III.—Indian students in other lands.

41. A brief review of the facilities available to Indian students in other countries is necessary to discuss why so many Indian students go abroad for purposes of study and how far the training given in the Indian universities is sufficiently articulated with that of universities elsewhere.

42. In his last report published before the outbreak of war, Sir Charles Mallet estimated the number of Indian students in the United Kingdom to be between 1,600 and 1,700. Of these 68 were at Oxford, 117 at Cambridge, 229 at Edinburgh, 760 at the Inns of Court in London and a large number (we have not the exact figures) at London and other universities. Those at Edinburgh were for the most part students of engineering and of medicine. It is probable, however, that there were also students who had no connexion with Sir Charles Mallet's organisation and were therefore unknown to him. Statistics regarding the number of Indian students who proceed elsewhere than the United Kingdom

[1] Chapter XXXV.

are not available. Mr. Coyajee[1] reported to a conference, held at Simla in 1917 that "very many Indian students went to foreign countries and that the number of those so going exceeded that of students proceeding to the United Kingdom." Mr. Rudra[1] thought that "on account of the increasing business connexion with Japan, in particular, the number of students proceeding to that country would tend to increase in the future."

43. It is therefore pertinent to our inquiry to discuss the reasons why so many Indians go abroad for purposes of study. Some undoubtedly do so in order to enlarge their horizon of thought by foreign travel and to take advantage of the literary, professional and industrial training which is available to them. A few are assisted by the State, by private associations,[2] and by individuals, by means of scholarships tenable outside India. But a very large number are attracted to England by certain professional and service privileges which are not available to them in India.

44. Under the Indian judicial system, barristers have certain advantages over those who have received their legal training in India and become pleaders. Whereas the latter may not practise on the original (though they may on the appellate) side of the High Court, the former are subject to no such restrictions; and in appointments to the Bench a barrister has certain advantages.[3] Such being the case, there can be little wonder that large numbers of Indian students—there were as many as 760 in 1913-14—receive their legal training at the English Inns of Court.

45. Perhaps the chief incentive for study in England is that the recruitment of the Imperial services is usually regulated in England, either by examination or by nomination. The Public Services Commission reported that—

"with the exception of a small number of specialist appointments, recruitment is made in India for the post office and the telegraph (traffic),

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[1] Report of the Conference of Provincial Secretaries to Advisory Committees for Indian students proceeding to England.

[2] "In March 1904, an association was established in Calcutta for the advancement of the scientific and industrial education of Indians, the main object of which was to enable properly qualified students to visit America, Japan and other foreign countries to study arts and industries. Under this scheme, over 300 students have been sent abroad with the assistance of the association, to the funds of which the Bengal Government contributed an annual grant of Rs. 5,000 reduced, since the outbreak of the war, to Rs. 2,500." Report of the Indian Industrial Commission, page 94.

[3] See also Chapter XXII, para. 2.

land records (Burma), railway (stores), registration, northern India salt revenue, salt and excise and survey (Madras) departments. On the other hand, in the military finance, geological survey, mines, mint and assay and railway (locomotive and carriage and wagon) departments, it is customary to indent upon Europe for practically the whole of the personnel. In the civil services and the agricultural, civil veterinary, education, forest, medical, police, telegraph (engineering), public works, railway (engineering), and survey of India departments recruits for the Imperial branches are obtained ordinarily from Europe, and for the provincial branches or their equivalents ordinarily from India."

Recruitment in England is made for some departments such as the Indian Civil Service and the Indian Medical Service, by examination; and for other departments such as the Indian Educational Service, by nomination. The prospects of the Imperial services, and especially of the Indian Civil Service, are so vastly superior to those of the Provincial services that many Indian students feel it worth their while to go to England to take their chances of success.

46. It will now be convenient to give a very rough summary of the main qualifications required from Indian students by some of the leading educational institutions overseas. Information regarding the qualifications required by American and Japanese universities is very difficult to obtain, but Mr. Coyajee has kindly favoured us with the following note:—

"Preliminary educational requirements for admission to American universities are measured in terms of units. Very broadly speaking, a unit represents about 180 hours of work on a subject in an American secondary school. 14 to 16 units are required for admission to a first-grade university. It is in terms of these units that the past studies of an Indian student will be measured in America. Consequently, any Indian student going there must take with him a certified syllabus showing the subjects he has studied and the units of work done in them.

There are several ways of admission to an American university:—

(1) Admission upon certificate: In many universities a student can be admitted upon a certificate that he has gone through a four years' course in a secondary school. This at present is not possible for an Indian student. But it may, some day, be feasible for an Indian if there was a similar standardisation of studies in our school and college teaching and our units of study were brought up so as to be equal to the units of study required in America. Such a system would also require recognition by the proper American authorities.

(2) Admission by examination: The Indian student can substitute any classical language for Latin. Besides, he will have to take up English, mathematics, physics and history. If he fails to pass this examination, he might be admitted conditionally. In that case he has to pass certain examinations (two are held annually)

and thus 'remove his matriculation deficiencies.' This of course requires extra work.

(3) Admission as an adult special student: This is the best way in which an Indian undergraduate can join at present. He does not require any adjustment (calculation of the equivalence of his studies) with those required by an American university and he can remove his matriculation deficiencies in proper time by sitting for the examinations mentioned in the last paragraph.

(4) Admission with advanced standing: At present this course is impossible for an Indian student, *e.g.*, a student who has put in two years at the Presidency College, cannot enter an American college in its third year course. The reason is that the American courses of study are either very extensive or imply a great deal of specialisation. Hence they assume a lot of earlier studies, technically called 'pre-requisites.'

(5) Admission to the graduate school (post-graduate studies): So far we have been speaking of our under-graduates who proceed to America. But a graduate from here can at once join the graduate school and proceed to take his 'second degree' *i.e.*, either M.A. or Ph.D. Such a graduate will have first to choose his course of study and then will come the question of the work he has already done in India and whether it fulfils the 'pre-requisites' of the degree. If he has not, he has to put in more time and sit for the necessary examination to show that he has fulfilled the 'pre-requisites.' Our universities will be considered second-grade universities and our graduates cannot take their second degree in one year. An M.A. from India can take his M.A. in America in one year and his Ph.D. in two years.

As regards Japan an Indian degree is now expected at the entrance to a university. This was not the case formerly, but it was then found that such unqualified men could not complete the course. Hence any one who wants to join a Japanese university should either be a graduate or he must pass the high school examination of Japan. This, however, he can do at any time, even after taking his entrance examination which in that case becomes only a formal test."

47. In regard to the qualifications for admission required by universities in the United Kingdom, information is more readily accessible; for the Students' Department at the India Office and the Advisory Committees in India for students proceeding to England have published a number of pamphlets on the subject. But the information provided in the university and other calendars is not always precise; and regulations are liable to frequent changes. Many universities again prefer to deal with each application on its merits. The following summary, however, will give a rough idea of the qualifications required from Indians at the

time of admission by some of the educational institutions in Great Britain :—

(*a*) *The University of Cambridge.*—A matriculated student of Calcutta University who has (*i*) in accordance with the regulations of this University, studied for not less than two years at one or more institutions for the education of adult students affiliated up to the standard of graduation, (*ii*) in the matriculation, or some higher examination of that University, satisfied the examiners in Greek, Latin, Sanskrit, Arabic, Persian or Pali, and, (*iii*) passed in the first division in the intermediate examination in arts or science, or passed with honours in the first or second class in the final examinations for the degree of B.A. or B.Sc., or passes the M.A. examination is entitled to either or both of the following privileges :—(1) Exemption from all parts of the previous examination, and (2) to reckon the first term kept by residence as the second, third or fourth terms. A student who has taken the doctor's degree can join as an advanced student and is entitled to take his degree either on research work or by passing the second part of the Tripos examination.

(*b*) *The University of Oxford.*—Indian graduates are exempted from responsions and an additional subject after responsions. Indian graduates with honours may (*i*) reckon the term in which they are matriculated as their fifth term for all purposes of provisions respecting university standing, (2) are exempted from all parts of responsions in the first public examination and for any preliminary or previous examinations of the second public examination, and (3) can take the degree of B.A. after a residence of eight terms (two years) instead of twelve.

(*c*) *London University.*—Persons of 19 years of age and upwards who present foreign or Indian certificates (other than diplomas of degrees granted by recognised Indian universities) from an academic or other educational authority, which indicate that they have attained a standard *primâ facie* equal to that of the matriculation examination, may apply for examination before the Board of Examiners instead of at the matriculation examination. This examination can only be held at the University of London. Indian graduates are also admitted as candidates for degrees higher than that of bachelor (in faculties other than medicine) under special conditions, one of which is that they shall study in London as 'internal' students.

(*d*) *The northern universities of England.*—The joint Matriculation Board of the Universities of Manchester, Liverpool, Leeds and Sheffield and the University of Birmingham grant exemption from matriculation to students who have passed the intermediate examination of an Indian university.

(*e*) *Scottish universities.*—Indian students who present evidence that they have passed examinations which would admit them to universities in India are exempted from the preliminary examination, provided that *all* candidates whose native tongue is other than English, are required to pass an examination in English designed to test their ability to understand and use the language sufficiently for the purpose of study at a Scottish university.

(*f*) *Inns of Court.*—Indian graduates are admitted.

(*g*) *Medicine.*—The General Medical Council in London recognises certain examinations as qualifying for registration as medical or dental students of the Royal College of Physicians and Surgeons :—

(i) A licentiate in medicine and surgery of the Universities of Calcutta, Bombay, Madras and the Punjab may be admitted to the second

and final examinations of this Board without passing the first examination, on producing complete certificates of professional study from the medical school showing that he has completed all the course required by regulations and has attended courses for five full years.

(ii) Graduates in medicine, M.B., M.D., of the universities mentioned are admissible to the final examination of the Board without passing the first and second examinations on producing the same evidence in regard to study as is required of licentiates.

(iii) Candidates who have not obtained a license or a degree can claim exemption from the first examination, if they can show that they have passed in the corresponding subjects for a license or a degree at one of the above universities, and will be given credit for such courses of the curriculum as they may have completed.

(iv) Apothecaries or hospital assistants of the Indian Medical Service may be permitted by the committee of management of the Royal College of Physicians and Surgeons to be exempted from the first examination, but are required to pass the second and final examinations, and although they may have completed the four years' curriculum, they are still required to complete at least two years of additional study before admission to the final examination; each of such cases is dealt with on its merits by the committee on consideration of the certificates of study produced.

(v) For all the above classes of students it is necessary that they should produce evidence of having passed the required entrance examination and complete certificates of all the courses of the curriculum as well as their diplomas.

An M.B. of an Indian university can claim the following privileges:—

(1) He can at once proceed for his L.R.C.P. and M.R.C.S. in London.

(2) He can proceed to the M.B., B.S. degrees in London in three years instead of 5½ years, but he must pass all the examinations except the Matriculation.

(3) After two years, he can be examined for the F.R.C.S. at once without obtaining his M.R.C.S. as a condition precedent.

The University of London receives certificates for the complete course of medical education including clinical medicine and surgery preparatory to the M.B., B.S. degrees from the following institutions:—

Bombay.—The Grant Medical College.
Calcutta.—The Bengal Medical College.
Madras.—The Medical College.

48. There is thus no uniformity of practice among the British universities in the recognition of Indian examinations as qualifying for admission to their courses. For example, whereas the University of Cambridge permits an Indian student who has gained a first class in the intermediate examination to take a degree in two years, the University of Oxford offers such a concession only to those who have actually taken a degree. It has also been pointed out to us that these universities grant more favourable

terms to candidates from the Dominions than to those from India. The most serious anomaly, however, is to be found in the rules for admission to the Inns of Court which recognise the Cambridge senior local examination, subject to certain conditions in regard to Latin, as equivalent to an Indian degree. In India, this Cambridge examination is regarded as equivalent to the matriculation examination of Calcutta University.

49. Before examining the several stages in their academic careers at which Indian students mainly join English educational institutions, we would allude to the successes which have been gained by the university State scholars. Between the years 1886 and 1913, 55 State scholars were appointed. Of these 22 gained admission to the Indian Civil Service, four to the Provincial Civil Service, one to the Indian Educational Service, two to the Provincial Educational Service, five (of whom one was senior wrangler at Cambridge) are holding important educational posts outside Government service, eleven have been called to the Bar, one is a Government engineer, and one is on the staff of a medical college. This list indicates clearly that these Indian graduates have been well selected and have almost universally acquitted themselves well in the universities of the United Kingdom.

50. With such few boys as are sent to England at an early age and pursue a preparatory and public school, followed by a university course, we are not directly concerned, as they are not connected in any way with the Indian university system.

51. A certain number of students proceed to England after passing the matriculation. Their maturity and general attainments therefore are scarcely sufficient to enable them to undertake a university course with any marked benefit to themselves. They are not eligible for admission to the universities in England without a further examinational test, and can enter the Scottish universities only if they satisfy the examiners in a preliminary test in English.

52. A larger number of Indian students proceed to England after passing the intermediate examination. This stage, which in reality marks the completion of the higher secondary course, is suitable for such Indian students as may desire, for special reasons, to join a British university and to receive the regular course of undergraduate training.

53. If the sole motive of these Indian students were to benefit by English courses of training and to take English degrees, there would be no serious problem in providing for their needs. But a very large number of them desire also to qualify themselves for admission to one of the Imperial services, in particular the Indian Civil Service. Those who have been placed in the first class in the intermediate examination and proceed to Cambridge are not in any way embarrassed; for under the regulations of that University, they are entitled to take a degree after two years' study. They will then have some two years of preparation for admission into the Indian Civil Service, the examination being at present open to candidates between the ages of 22 and 24. The hope has been expressed that Oxford will grant a similar concession.

54. A large number of students leave India immediately after graduation to enter upon an undergraduate course at a British university, usually between the ages of 20 and 22. Under present conditions, this stage in a student's career is not, as a rule, well adapted to a course of undergraduate training at a British university. An Indian graduate is somewhat too old to adapt himself readily to the company of undergraduates some years younger than himself, nor should it be necessary for him to undertake a second undergraduate course. But very few Indian graduates attend, or have had the opportunity of attending, British universities as research students. We hope that the new arrangements contemplated for the organisation of advanced studies in the British universities may be of service to Indian students. A distinguished scholar of Calcutta University, who had enlarged his horizon of thought by having undertaken successfully some specialised work of investigation in a foreign university, should prove a most valuable recruit to the staff of any university.

55. Some difficulties are experienced by Indian graduates who are taking an advanced course of oriental study in the West owing to the fact that the methods of Sanskritic study in India are not in keeping with those in western countries. In a Government of India resolution it is stated that:—

"Professors[1] of Sanskrit in various European universities have complained that individual language scholars have been unable to enter at once

[1] Government of India Resolution no 399, dated the 1st May 1916, Appendix II (*d*).

on the course of study best fitted for them, through lack of preliminary knowldge which could qu te well have been acquired in India. Accordingly, if a Sanskrit scholar wishes to specialise in :—

(*a*) Veda or philology, he should have some knowledge of Latin and Greek;

(*b*) philosophy, he should have studied one of the systems of Indian philosophy in the original texts and have read some Plato and Aristotle;

(*c*) post-Vedic literature, his reading should have extended considerably beyond the limits of the courses prescribed for the M.A. examination of an Indian university."

56. At present the relationship between eastern and western universities is confined almost entirely to the inclusion of Indian students in the latter universities. Owing to the increasing number of Indian students in the United Kingdom, it was considered necessary in 1909 to constitute an organisation, subsequently called the Indian Students' Department, to supervise the needs of these Indian students. In recent years this Department has acted as an intermediary between educational institutions in the United Kingdom and Indian students. Provincial advisory committees have also been constituted in the important Indian centres. It is obvious that Indian students need advice before they embark on a long journey to Europe. Calendars of universities do not always contain the precise information required; and university regulations soon become out of date. Very often applications are decided each on its merits; and therefore additional complications are added. Educational authorities in the United Kingdom also expect from all their students certain guarantees and authoritative credentials; but these are difficult to obtain by correspondence with people in distant lands who are often unknown to them.

57. In his report for 1915-16 Sir Charles Mallet said that the Universities of Oxford and Cambridge had constituted special bodies to deal with applications from Indian students.

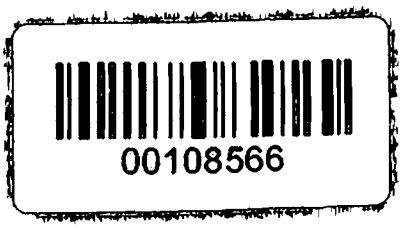
"Arrangements have now been made at Oxford and Cambridge with the cordial co-operation of the India Office, which ought to remove any grounds for such objections in future. A Delegacy for Oriental students has been created at Oxford, and an Inter-Collegiate Committee has been appointed at Cambridge, which will, to a larger extent, relieve the Students' Department of the India Office of its responsibilities as regards Indian students at those centres. The secretaries of the new bodies will be in future university officials, responsible only to the Delegacy and Committee which appoint them. ..... It is hoped that the new arrangements which owe much to the personal

interest and initiative of the Vice-Chancellors of the two universities, will be generally approved, and not least by the students concerned."

58. Though these two organisations are as yet confined in their duties to the task of admitting Indian students to the Universities of Oxford and Cambridge, it may be hoped that they will prove to be the germs of a closer connexion between the Indian and the British universities. As yet, the link between them is very slight. In recent years a certain number of scholars from overseas have been invited to this country by the Indian universities and have contributed new ideas for the improvement of teaching methods and university organisation. Little attempt, however, has been made to foster an organisation which will render an exchange of teachers or even of ideas easy of fulfilment. There are many contributory causes to this unfortunate state of things. The Indian universities, being by the very nature of their functions primarily administrative organisations, have little in common with the universities of the West; the service system is not easily accommodated to a free interchange of teachers; and the absence of any central organisation in India, except of an official nature, has proved an obstacle in the way of easy communication. The western universities again, with but few exceptions, have not as yet undertaken a serious investigation of many Indian subjects of study. Even if they desired to do so, information regarding the actual doings of the Indian universities in these directions and the relative values of their respective contributions, is not readily available. That contact between eastern and western universities, which is so desirable in the interests of both, can only be made real and effective by a recasting of the Indian university system and by the help of some organisation which will develope points of contact between them.

59. For the consideration of such points as have been raised in the foregoing paragraphs and of other matters of common interest in which co-operation or organised action on the same lines is desirable, we recommend that the authorities of the Indian universities should meet in conference from time to time. The constitution of such conferences should, we think, be of an informal character; their membership ought to vary with the topics to be discussed. Up to the present the regulations and statutes of the universities have been of so rigid a character that such conferences would have been of comparatively little use but if, as we hope,

the universities become more and more teaching corporations modifiable to meet the fresh needs of both teachers and taught, such conferences should prove of real value in promoting higher education in India.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CALCUTTA : PRINTED BY SUPDT. GOVT. PRINTING, INDIA, 8, HASTINGS STREET.

8 JUL 2002
8 MAR 2003
21 APR 2005

Digitized with financial assistance from

Government of Maharashtra

on 01 February, 2020